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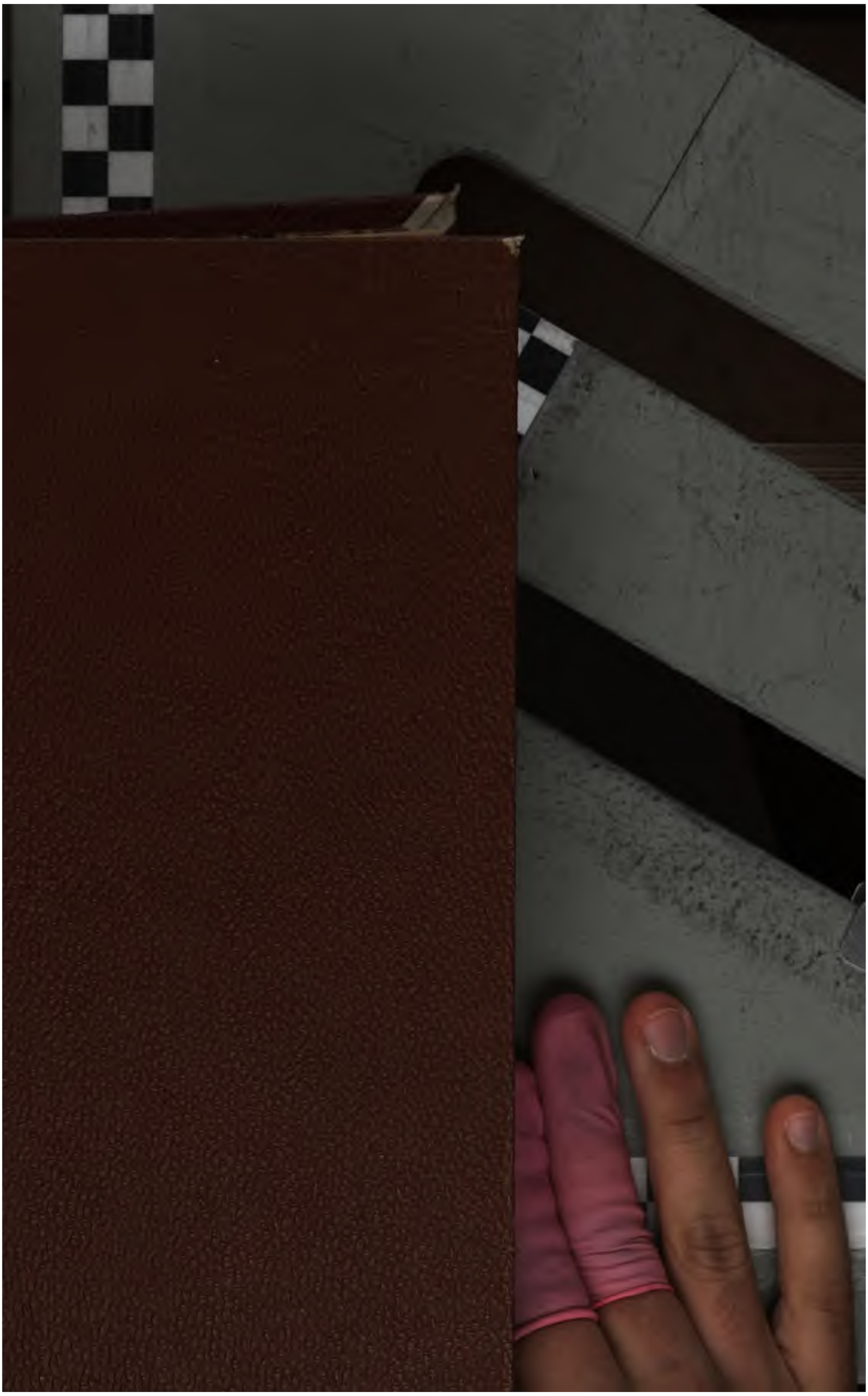

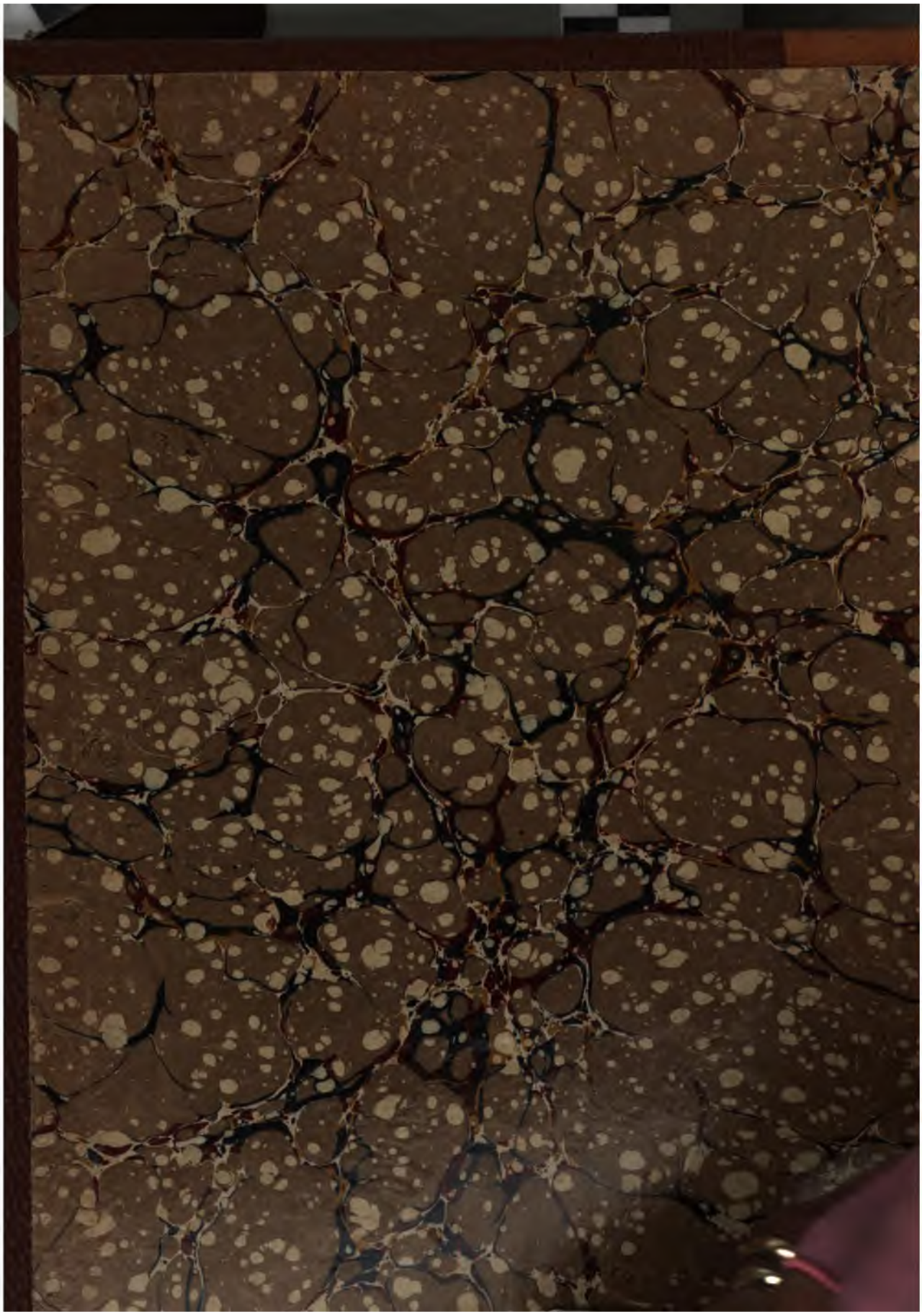

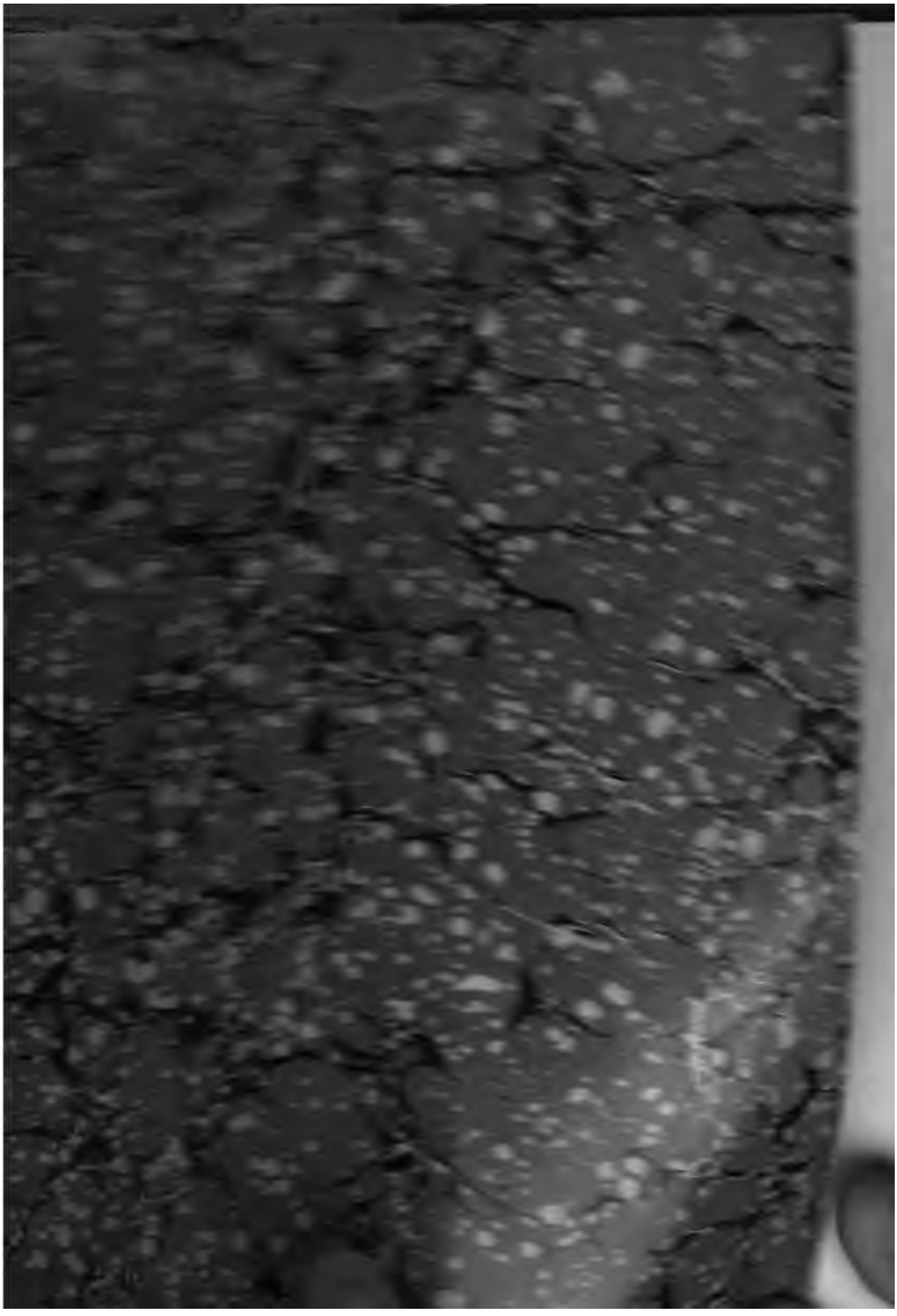

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SETH LOW

Fusion Candidate for Mayor of New York

THE WORLD'S WORK

NOVEMBER, 1901

VOLUME III NUMBER I

The March of Events

HAPPY in the extreme have been President Roosevelt's action and manner during the first month of his Administration. His straightforward earnestness has earned for him the hearty admiration of all classes. His insistence on the continuance in office of every member of the McKinley Cabinet and their generous response gave a feeling of steadiness to the Government that no other new Administration in our day has had. We are to try no experiments. The policy of the President that was suggested by events tallies exactly with his own convictions and temperament.

We have witnessed the gratifying spectacle of a change of Executives without the change of a single officer of the Government for political reasons. Not a clerk in any department has lost his place. And this stability of the personnel of the public service was so thoroughly taken for granted that it has hardly been a subject of comment. True, there has been no change of party control. But there was never before a time when a change of Executives, even of the same party, could have been made without at least some reminder of the quadrennial shocks that we used to receive. This smooth continuance of the whole governmental machinery is due partly to the tragic circumstances of the change of Presidents, but not wholly; for it is due quite as much to President Roosevelt's staunch support of the merit system. About his earnestness in this matter not even the wildest partisan had a doubt. Preceding Presidents subscribed to the same faith. Mr. Hayes believed in it, but he could not put it far into practice; it was not greatly furthered by Mr. Arthur; Mr. Cleveland was in earnest about it and the reform made great strides under him; Mr. Harrison was committed to it, although it suffered somewhat seriously at his hands; and under Mr. McKinley there were some retrograde movements, although the merit system continued to establish itself. Mr. Roosevelt knows more intimately the workings of the system than any of his predecessors knew, and he believes in it with a faith more firmly fortified perhaps than any of them. Still further extensions of it may reasonably be expected under his Administration.

In the gradual growth of civil service reform from Grant's Administration to Roosevelt's, this is a convenient time gratefully to emphasize the definite passing of the old system. Among the many significant facts of Mr. Roosevelt's succession to the Presidency this stands out—that national politics can perhaps never again spell spoils. Like all

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other great historic achievements, it has been so gradually won that its tremendous import is not easily grasped.

And during this initial period of the new Administration partisanship and sectionalism have alike been still; and American citizenship has been greatly dignified by the quiet. Sectionalism has long been dying—has for a considerable period been practically dead. It may now be called a past chapter in our history, with the greater certainty because President Roosevelt never knew what it meant to the older generation. He may be called the first of post-bellum Presidents. When the Civil War began he was three years old. During the period of Reconstruction he was a schoolboy. The active years of his life began after sectional feeling had clearly begun to die. Nor is he of a temperament to have a moment's sympathy with it if it were alive today. Apart from the fact that his mother came of a Georgian family, his continental view of American life would forbid him to consider the country by geographical sections. We are then very safely past the period of spoils and the period of sectionalism. May we not have hope that we are also past the period of violent partisanship in the press?

For this species of brutality is part and parcel of the spoils system, and is one in temper with the old spirit of sectional strife. If it was ever justified it is now obsolete. Free speech is not in danger. Free speech is the very jewel of a democracy, and it is as safe as trial by jury or the freedom of religious worship. But it does not imply "professional" fault-finding and personal abuse. The time is come when only thieves ought to be spoken of in the terms of our old political controversy. The truth is, thieves have thriven in political life because a large part of the press spoke of them in the same phrases in which it spoke of political opponents. The vocabulary of political controversy lost all meaning.

The time for leaving such manners behind us is come for more specific reasons than the sufficient reason of self-respect and dignity. We are no longer divided into two warring camps about domestic matters. The long struggle about our currency, which in its various forms lasted for a whole generation, is ended forever. The fight for a clean civil service is won. Sectionalism is dead. The old period of fierce strife about domestic policies and prejudices seems ended. Party life will continue—must continue for our political health; and there will be sharp party differences—differences no doubt along the old line of rigid and loose construction of the Constitution. But surely a distinctly new era in our political life is now come—come by a significant coincidence under a President who was never particularly identified with any of these old wrangles, a young man, a man of action and of continental breadth of mind, who is in hearty sympathy with the settlement that we have made of every one of these old controversies, but who naturally looks forward to new duties and not backward to a revival of any of these past issues.

It is, then, not a misuse of words to say that Mr. Roosevelt's Administration bids fair for a new era—the era that shall follow the final passing of the spoils system and the complete disappearance of sectionalism, the era of expansion of trade and of thought, a larger, outward-looking era of a softened partisanship and a more robust national life, when politics may again touch the imaginations of men and work toward positive achievements.

THE END OF A DULL PERIOD OF POLITICS

FOR no one can look back over the period of our politics that was controlled by men of the generation of the Civil War without observing a lamentable lack of intellectual interest in it. If it were not wasted energy, it was at least energy that was spent in disposing of old tasks rather than in doing new ones. For what was our national politics for the more than thirty years between the Civil War and the Spanish War? A long struggle about Reconstruction, a longer struggle about the currency—greenbacks, free silver, treasury warehouses and what not—and a running fight about tariff duties under the necessity of an enormous income to pay not only the war debt but the war pensions. These were necessary, but they were all part and parcel of the past. We were settling old difficulties, solving old problems, paying old debts, healing old sores. We were not going forward in political thought or action by a single step.

But the nation itself meanwhile was going forward in industrial development, in the spread of well-being, in the accumulation of

wealth, in the diffusion of education. Consider how different our life and thought and work are from the life and thought and work of men of thirty years ago. It has been a time of unmatched changes and growth. But until the Spanish War, practically the same political subjects were discussed in Congress, on the stump, and in the press that were discussed a generation ago. A political orator or platform-writer of the early seventies might have presented his thesis with little change three years ago, and he would have been applauded for its aptness. In fact the same old theses, with modifications rather of manner than of matter, did service all that time. Except Cleveland every President between Johnson and Roosevelt had served in the Civil War.

How unspeakably tiresome politics became, and how inadequately it expressed American life and character! This period will take a place in our history as the most insufferably dull era in our political annals—the period in which a great nation was fast forging its way to the leadership of the world in all the practical arts, and yet in which its political life was without charm, ambition, imagination or positive achievement. More political bores attained national influence, more commonplace men rose to high positions, more solemn platitudes passed for wisdom—let us who look to politics for a noble and worthy expression of national life thank Heaven that such an era seems at last to have come to an end.

This is not written in forgetfulness of the noble service done in defeating the recurrent threat of inflation, and in slowly and surely establishing the merit system against great odds; nor is it written with too slight respect for the worthy public service of any man or any party. But the simple truth is that political life became dull, became sordid, became narrow, because there was little in it to appeal to the imagination of men, little in it to keep alive a keen personal sense of the privileges and duties of citizenship. The monotony of it, the commonplaceness of it, the sheer routine of it were tiresome because the larger outlook that lifted the Fathers of the Republic into greatness and the fierce struggle that raised the men of the Civil War into heroism were lacking. Tiresome tasks may be important, but they generally fall to dull men to do, and make a dull period.

Nor does any thoughtful citizen care to have exciting politics. Political activity is and ought to be but a small segment of American life. Yet our national politics ought to be a worthy expression of our activity, of our ambition, and of our achievement, and not a mechanical thing apart from our national life, as it was for thirty years or more. The McKinley Administration, under which it came again to take hold on the life of the present and found new tasks of stimulating importance, will mark a turning point in our history. It is our great good fortune that Mr. McKinley's successor belongs to the new epoch and not to the old; and it is Mr. Roosevelt's good fortune that he comes to power when our political life gives promise of becoming more interesting than it has been at any time since he was born.

TWO GREAT TASKS BEFORE THE ADMINISTRATION

THE most important visible tasks that lie before the Administration are the delicate and difficult task of adjusting our fiscal machinery to our expanding trade, and the clearing of the way by negotiations with Great Britain for the construction of an isthmian canal under American control.

The policy of Mr. McKinley and of Mr. Hay, with which Mr. Roosevelt is in hearty sympathy, was to make such reciprocal treaties as will remove obstructions to our foreign trade and further advance it. The Senate has proved itself the graveyard of such treaties. We are confronted, then, with this singular situation—the diplomacy of the Government is taxed to its utmost to deal not with foreign Governments, but with our own Senate. The Senate may cause delay and vexation; but it cannot long successfully contend against a great national movement. For our expanding trade is a great national movement, a movement deep-seated in economic laws. The working power of the American people is behind it. Political prejudices and partisan contentions must yield at last. If during the coming winter there be a struggle between the Administration and the Senate over reciprocity treaties, Mr. Roosevelt and Mr. Hay may be very sure of the support of the country.

It is to be hoped, too, that Mr. Hay will have the success that he deserved last year

iis negotiations with the British Governit regarding the isthmian canal. For this ie next most important subject. In this he was balked by the Senate. To that :rprise we are committed, and the prelimy agreement with England, whereby we cut it and control it without complicas, must be reached with dignity.

'hese are the two great tasks that lie be- the Administration. Both are national heir scope and far-reaching in their imance. Neither great political party, as a y, opposes either. Both have indeed long mitted themselves to the American conction and control of a canal. These two t duties admirably illustrate the change i tom-tom politics to undertakings of the iest importance to the whole world for all : to come.

RECIPROCITY AS A WAY OUT

'HE direct commercial results of reciprocity treaties, such as were proposed by Kasson Commission and are permitted by Dingley Tariff Act, are not great. They far less important than perhaps the public erstands. But it is the principle of reciity treaties that commends them to our ness world. We must avoid provoking iminating duties such as Russia imposed some of our manufactures. We must whatever advantage the laws of other ons will give us under their most favorapplication to us. In a word we must permit our high-tariff policy to hinder herever we may profit by such modifica- of it as the Dingley law allows.

does not require any great intelligence e that reciprocity treaties are but a first ch in the high-tariff wall. But it is the practicable breach. It does not lower duty in general but only duties on certain ucts from certain countries; and it does without disturbing these same duties on e same products from all other countries. Dingley law stands, except when by a ification of it we may get some particular ntage, and the permissible modifications iot radical. The maximum that may be tted is twenty per cent. of the Dingley duties.

ne noteworthy fact about our present rocity plan is that it does not enable us give any especial favors to England, which is our best customer. The English free trade policy admits of no chance to bargain. Another disadvantage about the present law, as many men regard it, is that it puts the duty of lowering or raising customs rates on the Executive Department of the Government. But with all its disadvantages it is an instrument which we can for the present use to advantage; and it is the route whereby our highly protected industries may gracefully and gradually come to a freer commercial policy.

THE INTIMATE RELATION OF THE PRESIDENT TO THE PEOPLE

SHALL the President of the United States give up the custom, as old as the Government itself, of freely meeting the people? In an impressive article in the *Saturday Evening Post* of Philadelphia Mr. Cleveland expresses his doubt of the wisdom of doing so, with a degree of right feeling that seems conclusive. He points out the almost intimate personal relation that exists between the people and the President. Their mutual regard is genuine and deep. "The relation between all the decent people of the land and the President," he says, "is very close." To have free access to him stimulates their patriotism; and Mr. Cleveland reminds us, too, that the President himself must be considered. He says with a tone of interesting personal feeling:

> "We shall never have a President who is not fond of the great mass of his countrymen and who is not willing to trust them. His close contact with them is inspiring and encouraging. Their friendly greeting and hearty grasp of his hand, with no favors to ask and no selfish cause to urge, bring pleasant relief from official perplexities and annoying importunities. The people have enjoyed a generous access to their President for more than a hundred years. Weighing the remote chance of harm against the benefit and gratification of such access both to himself and the people, it can hardly be predicted that a project for its abolition would be sanctioned by any incumbent of the Presidential office."

But, if it be undesirable for the President to deny himself to the public, there are other ways in which he ought to be protected. Mr. Cleveland strikes as near to the centre of the whole subject of personal danger to high officials as it is possible to strike when he says that "mendacious and scandalous per-

sonal abuse" indulged in "under the guise of wholesome criticism of official conduct" is responsible, if not for anarchy and assassination, at least for such a lowering of the tone of public life as may encourage them. "Not the least among the safeguards against Presidential peril," he adds in his characteristic manly fashion, "is that which would follow a revival of genuine American love for fairness, decency, and unsensational truth."

Further than this it is perhaps impossible to go. No plan of suppressing anarchy has been proposed which has not been vainly tried, in Russia, for example. It is a kind of social insanity that it is hard to deal with till it take form in some definite act. Shall we exclude anarchists from our shores? Yes; but it will be easy for an anarchist who has not publicly avowed his creed simply to remain silent and to come in. Czolgosz would have been admitted, if he had been an immigrant, under any law that could be framed. Besides, Czolgosz and many other anarchists were born here. It has been proposed, too, that meetings of persons who hold the creed of anarchy be prohibited. Public meetings could easily be prohibited, but no law could prevent private meetings. Their journals may be suppressed and it may be made a crime to express sympathy with the doctrine of violence. But this measure also Russia has tried to the utmost. The building-up of a sound citizenship and the maintaining of a decent respect for our public servants are perhaps all the measures that can be depended on.

THE PRESIDENT'S POLICY IN MAKING APPOINTMENTS

THE earnestness and the broad common sense of the President as well as his freedom from sectional politics were admirably shown by his appointment, to the bench of the United States Court, of ex-Governor Thomas G. Jones, of Alabama. Mr. Jones is a Democrat. He was a Democratic Governor of Alabama, and a Democratic member of the recent State Convention. But he is not a man of narrow partisanship. It was he who caused to be inserted in the amendment to the Alabama constitution the clause giving the Governor power to remove a sheriff who fails to defend a prisoner against a mob. He is a man of liberal opinions, of conspicuous courage, and of a strong personality.

The President's frankly avowed policy, which was his policy as Governor of New York and is the only policy that a man of such an earnest, straightforward nature could adopt, is to appoint Republicans when Republicans are recommended who are fit, but to appoint fit men always whether they be Republicans or Democrats. And he will take counsel about appointments with Senators and Representatives, giving them to understand that they must recommend only fit men. The common sense of this course commends it. The President may encounter the crit icism of local political managers; but, if he resolutely follow this course (and he is resolute or nothing), he will never encounter the criticism of the larger public for his appointments.

OUR LARGE ECONOMIC PLACE AMONG THE GREAT NATIONS

THE increase in population of the chief countries of the world during the last century was as follows:

United States	from	5	millions to	76	millions
British Empire (English population)	"	15	" "	55	"
Russia	"	40	" "	135	"
Germany	"	20	" "	55	"
France	"	25	" "	40	"

In interpreting these statistics, Sir Robert Giffen, the English statistician, in a recent address before the British Association, emphasized the necessarily increasing part that the United States must play in the world. The four dominant nations are the foregoing —omitting France. Of these the United States has outstripped all but Russia in population; and its rate of increase for another century at least will be greater than that of any European country. But the rate of the increase of population is important less in itself than for what it signifies. England and Germany are not self-maintaining in food products and can never become so. They must depend on the United States, and later, perhaps, on South America. The United States, therefore, has the prodigious economic advantage of supplying its own food, of helping to feed Europe and at the same time of sharing with England and Germany the world's trade in manufactured wares — an economic advantage that will be the chief factor in determining the relative national power of these several nations in the future. A country that cannot produce its own food-supply must perforce become a manufacturing

country; but it is forced also to maintain sea-power to protect the food-ships that feed it. In other words Germany, which has already outgrown the agricultural possibility of maintaining its population, will develop, as England has developed, as a manufacturing, food-importing country. Leaving unknown Russia out, no country in the world has the economic advantages that we have, nor the independent position for the coming centuries as far as economics dare look.

It is well to digest these larger facts for the firm establishment of our faith in our country and in ourselves. But they can show only our opportunity. The wise use of the opportunity is a matter of character and diligence and of well-directed industry —of unresting, unboastful labor to work out the great part that Nature has assigned to us.

But this much is certain—these great economic facts open a vista of almost world-wide commercial conquest for us, which will engage us for generations to come. The instruments of our conquest themselves doubtless seem prosaic; but, when their enormous significance is considered, they become eloquent of power for civilization. First and foremost, the steam-engine and the dynamo. It is these that have changed the mediæval man into the modern man—in the hands of men with free scope for their own development. They are the basis and the cause of modern civilization. The next fact is that, thanks to a natural aptitude and to a free opportunity, the American workingman has become easily the best practical master of steam and of electricity — the best machinist, in a word. Following these mechanical triumphs, and as a part of them, American machine-tools (labor-saving devices) mark an advance beyond the achievements of any other people. One step further, too, we have already gone—American organizing and executive methods have kept pace with the development and adaptation of machinery.

The meaning of these mechanical facts and of the aptitude for doing things that they imply is wider than can yet be clearly seen. But there can be little doubt that the changes of civilization already wrought through mechanical discoveries and applications and through the better organization of work, are but the beginnings of a long series. It is probable that we have yet done hardly more than to discover the key to such changes. What has been accomplished is likely to be but an experimental beginning.

The important fact is that the American workman, the American machine, the American organizer have the lead; and, when we come rightly to measure the dominant forces of modern life, we shall see a vista of practical achievement that gives to these prosaic facts an enormous imaginative value. In one of the latest Utopian forecasts a period is described, when all the material needs of mankind shall be produced or supplied automatically—a time of the complete triumph of applied chemistry and physics. Such a state of ease is not yet clearly in sight, but till it come the steps toward it are the steps that we are taking.

OUR GROWTH EXPRESSING ITSELF IN EXPOSITIONS

OUR prosperity and expansion of activity are finding many-sided celebration in expositions, which Mr. McKinley called milestones of national progress. Just as the beautiful Pan-American Exposition at Buffalo comes to a close, the South Carolina Interstate and West Indian Exposition at Charleston is in preparation for its opening on December 1, for a period of six months, and most active preparations have been begun for the great world's fair at St. Louis, in 1903, in commemoration of the Louisiana Purchase. The Charleston Exposition has far outgrown the original plan, and the promise is of both an interesting and novel display of Southern and West Indian products and industries. It is a pleasure to express a hope for the utmost success of the enterprise. It has a twofold reason for existence—to show forth the rapid industrial development of the Southern States, and still further to encourage trade and closer relations with the West Indies. To these a third attraction may be added—Charleston is one of the most interesting of our old cities. If interest in it for a long time has been rather social and historical, it is for this reason all the more fit that its industrial and commercial possibilities should be emphasized.

The great fair at St. Louis is planned on a colossal scale. The cost of the construction, for instance, of the Columbian Exposition at Chicago was $18,000,000, of the last Paris

Exposition $9,000,000, of the Pan-American fair at Buffalo $10,000,000; but the construction cost of the Louisiana-Purchase Exposition will be $30,000,000. The Buffalo fair covers 350 acres, the St. Louis fair will cover 1,100 acres. This great international exposition in 1903, commemorating so important an historic event, will itself be an event of historic importance. The energy and the spirit and the large-minded way in which its managers and builders, under the presidency of Mr. David R. Francis, are doing their work will make it a fit celebration of the colossal results of Jefferson's far-sighted wisdom and of the unmatched prosperity of our latest era of expansion.

A PROPOSED DEPARTMENT OF COMMERCE

WHEN it was first proposed to give the Department of Agriculture Cabinet rank the proposal provoked much derision, and the creation of a Secretary of Agriculture was for a long time regarded as a "sop to the hayseeds." The politicians wished to please the farmers. But the Department has developed into an agency of greater practical utility than any other Department of the Government. It has become one of the most notable and efficient instruments of public service that was ever devised or developed since government began.

This fact is worth recalling now when the pressure of work on the other Executive Departments at Washington has again started a movement for the creation of a Department of Commerce. There are two reasons why the suggestion seems a good one—the Departments, especially the Treasury Department, are now overcrowded with work that logically belongs rather to a Department of Commerce than to them, and the continually increasing importance of our foreign trade demands special executive attention.

The recent rise of our exports (including agricultural products) to the foremost place has enormously increased the work, especially of the Treasury and State Departments. And our export trade is yet only the beginning of what we shall build up—it may be said that it is even a small beginning. Such

opportunity opens before any scient of our expanding commercial life ier people ever dreamed of. We what we have won by sheer energy without art. When we learn the art of trading abroad the world will be our market. There are many ways whereby a Department of Commerce would not only relieve the other Departments, but would do work that they in their crowded condition cannot now do—new work toward the great development that awaits us.

THE MASSACRE OF OUR SOLDIERS IN SAMAR

THE slaughter by treachery of more than forty men and three officers of the Ninth Infantry of our army on the island of Samar in the Philippine archipelago on September 29 was the largest loss of life that we have suffered at one time since the outbreak of hostility to us there. Not only were forty-three of our men slain, including Captain Connell, but as many as one hundred or more hostile natives—as large a loss of life as might happen in a very considerable battle. But fortunately the attack was not a part of a concerted movement. The discipline of the camp does not seem to have been especially lax. The men were at breakfast, when four hundred bolomen attacked them, two hundred from the front and two hundred from the rear. Among their leaders were natives who had long been on the most friendly terms, including the President of the village himself. It was a case of treachery. There was a fierce hand to hand fight and the American soldiers killed nearly four times their own number.

Samar is one of the remote islands of the archipelago, and its inhabitants are among the less advanced of the Philippine peoples in civilization. This was such an outbreak of savage fury as might at any time happen among such a population. But it shows that with the best progress it will be a long time before a scattered population of 8,000,000 people of widely variable degrees of civilization can be brought into a permanent and safe condition of peace and development.

OUR UNHAPPY NAVAL AND WAR CONTROVERSIES

THE Schley court of inquiry and the publication of a book by Mr. Alger, who was Secretary of War during the war with Spain, come as unpleasant reminders of controversies between brave men which are regrettable. But it is well that both come.

The fullest expression and the frankest investigation of official conduct is the best method, the only method indeed, of keeping the public service (whether military, naval, or civil) keenly sensitive to its honor. When this paragraph is written the Board of Naval Inquiry is still in session; and it is proper to say only that Rear-Admiral Schley did right to ask for an inquiry. He ought to have done so sooner—so many of his friends think. Both the naval and the army controversy have in great measure been created by the press and by the politicians; and this is the regrettable aspect of them.

A sadder touch is given to both these old controversies by the fact that almost every participant in them is on the eve of retirement. General Miles will be retired August 8, 1903; Rear-Admiral Schley retired on October 9th of this year; Rear-Admiral Sampson has already been relieved at his own request, and he will be retired on February 9, 1902; Admiral Dewey, the presiding officer of the court, reached the retiring age, December 26, 1899.

Apropos of Rear-Admiral Sampson's relief from duty and his early retirement, the readers of this magazine will read Mr. Hollis's admirable review of his career with instruction and pride. As student, shipmate and friend Mr. Hollis has known him intimately; and his description and estimate of him is a piece of biographical literature that Americans will read with hearty appreciation, and with an affectionate regard for the great naval commander in his retirement.

TAMMANY THE MOST LOATHSOME FACT IN AMERICAN LIFE

THE municipal campaign in New York City, which will end with the election on November 5th, a few days after this magazine is published, is extraordinary for many reasons. It is of much more than local or temporary importance. The single question is—Can Tammany be overthrown? There is no other question. There is no subject of party politics involved in the contest. Republicans, Independent Republicans, many Democrats, Independent Democrats and some other political and even semi-political organizations have combined to elect Mr. Seth Low mayor. His independence of all political machines is not questioned, and he has considered the nomination a call of public duty; for he resigned the presidency of Columbia University to accept it without obligations or embarrassment.

Corrupt government has gone to such a length in New York City that the scandal of it is a national disgrace. Except Philadelphia, no other American city has suffered such degradation. A Boss of low character has ruled it from his country-seat in England (that's a new and audacious degree of boss development, surely!) as absolutely as if he were a monarch with powers of corruption. And the Tammany organization has encouraged vice till it draws revenue from the organized debauchery of children. However diligent the effort has been to obscure the main matter by political talk, it remains a matter of decency and not a matter of politics. The very foundations of social health are imperilled.

The strength of Tammany is twofold—the strength of a compact organization of the beneficiaries of bad government and the strength of the fiction that it is a Democratic organization. No great party ever committed a graver mistake than the Democratic party has committed, through some of its leaders, in recognizing it as a Democratic organization. Its identification with the Democratic party has cost the party character and standing in our largest city, just as the Republican ring in Philadelphia has caused a lowered standard of the Republican party.

The Tammany Boss, frightened into "pandering to the better element," nominated Mr. Edward M. Shepard, who four years ago earnestly spoke and worked for Mr. Low's election and was an uncompromising enemy of Tammany. Mr. Shepard is a man of even fastidious honor and of dignity. But he surprised his friends by supporting Mr. Bryan last year, when he had bitterly opposed him four years before; and he has surprised them still more by accepting the Tammany nomination for mayor. The selection of Mr. Shepard is familiar tactics of the remorseless machine. Whenever the danger of defeat is great enough to warrant a temporary surrender—or apparent surrender—to decency, it "reforms." If any man be sufficiently robust to accept a nomination from Tammany and really to reform it, Mr. Shepard is not such a man. The truth is, no man is robust enough

for such an impossible task. Reformation is impossible. The only hope is in destruction.

Considerable as the progress is that has been made in many cities, municipal government is yet our most difficult problem. New York and Philadelphia are today shameful evidences of this fact. In one city the officials are openly for sale. In the other the lowest vices yield revenue to the rulers. The defeat of Tammany, if it be accomplished, will mark a noteworthy rise in the character and the dignity of municipal citizenship. The unspeakable degradation of the metropolis dims the splendor of American achievement, discredits the effective manliness of American character, and is the most loathsome fact in American life.

THE SCIENTIFIC BASIS OF MUNICIPAL POLITICS

WE have had a wide range of experience in municipal government. We have great cities and small ones, old cities and new ones, cities where one political party is dominant and cities in which the other is dominant; we have cities that have always been under party-rule, cities that have long discarded party-rule and cities that have tried both plans. This varied and long experience ought by this time to supply data for some scientific conclusions. Most men who have seriously studied the phenomena of this wide range of experiments agree that the first principle in good municipal government in the United States is this—

That municipal government cannot long be clean or efficient under national-party control.

The reason is obvious. Aggregations of population breed bosses and bosses become corrupt; for so long as municipal affairs are conducted on party lines, Democrats will vote for Democratic nominees and Republicans for Republican nominees and the fitness of candidates for the duties of their offices is forgotten. The city is sacrificed to national politics.

The same conclusion is reached from the opposite approach to the subject. In every city there are definite and difficult municipal tasks to be done—tasks that are peculiar to that city. The questions—how these tasks shall be done and by whom—create municipal parties; and these municipal parties exist in different cities for different reasons. In every city they have somewhat different issues. Thus arise municipal politics proper.

It is upon the issues of municipal politics that municipal elections ought obviously to be decided.

Mr. Shepard, the Tammany candidate for Mayor of New York, would have Democratic mayors in all cities where the Democrats have a majority and Republican mayors in cities where the Republicans have a majority. He would conduct municipal campaigns for party ends—to keep party machinery active. His aim in accepting the Tammany nomination (passing over the error of regarding Tammany as a Democratic organization) is expressed in a way that would do great credit to a Democratic candidate for Congress or for the Presidency. He says:

> "The citizens, many of them venerated by myself, who, in the heavy and depressing atmosphere of plutocracy now so dominant, have come to believe that there cannot be and ought not to be any Democratic party with its face deliberately and resolutely set to the future and standing for self-government and the equal rights of men, are mistaken. There ought to be, has been and shall be such a Democratic party."

All men of Democratic traditions and of a well-informed Democratic faith will heartily subscribe to Mr. Shepard's wish for a Democratic party. But it has no more to do with the present matter in hand than a declaration of faith in any other philosophy. He is simply the personal nominee of the worst boss of this generation, who has no better comprehension of Democratic philosophy than he has of the Rig-Veda.

Progress in municipal government can be made only by regarding the municipality, not the Nation, as the unit.

THE KIDNAPPING OF AN AMERICAN MISSIONARY

THE kidnapping of Miss Ellen Stone, an American missionary, by brigands in Macedonia, for ransom, is a startling novelty in missionary annals. Kidnapping for ransom is not a new thing in the world, but the demanding of a ransom for a missionary is. The brigands made a deliberate choice of Miss Stone as a victim, for she was traveling with a company in which there were persons who might have seemed better victims if the brigands had not thoroughly understood the

large and new chance to work upon the sympathy of Christian people. It was an intelligently-laid plan. In spite of the fact that the ransom demanded—demanded in a very business-like way, too—is said to be $110,000, when this paragraph is written a large part of it has been subscribed by persons of all classes in all parts of the United States.

It would be wrong to do less than to pay it. Miss Stone must be rescued; and fortunately it is understood that if the ransom be paid she will suffer no harm. But her rescue cannot be the end of the matter. It is too serious a thing and too bad a precedent for action to stop there. We have not heard the last of this startling incident, we may be sure.

A PAN-AMERICAN CONGRESS THAT PROMISES RESULTS

LITTLE as the mass of the people in the United States know about Central and South America, our knowledge of these countries and our interest in them have greatly increased in recent years. Commerce has been the most important force at work, as it usually is in bringing nations close together. In late years, too, the enterprise and the money of our citizens have been finding scope and investment in the Southern countries. But even yet there is a lack of intimate knowledge, one of the other, partly because the difference in race is harder to overcome than merely political and climatic differences. Mr. Blaine's praiseworthy efforts to make us better acquainted with these countries, and their people better acquainted with us, never brought the direct results that they deserved; for there has hung about most of the popular literature concerning Central and South America that has found its way to readers in the United States a suspicion of the promoter. It is next to impossible now for any man who looks for trustworthy information about them to find it.

But our Government has always been zealous in maintaining intimate relations with these States; most of them have kept well-informed and very courteous representatives at our capital and in our principal ports; and, best of all, many of them heartily coöperated with the managers of the Pan-American Exposition. Our knowledge of them and their knowledge of us has continued to increase. Out of it is bound to come in the fullness of time a closer relation which shall be alike for our benefit and theirs. They have passed, or are fast passing, the period of government by revolution; our expanding commerce must find a constantly enlarging market there; we are contributing to their material development so rapidly that we are acquiring a heavy stake in almost every one of them; and by the working of natural forces they will come closer to us and recede further from Europe.

For these reasons the Pan-American Congress now in session at Mexico has a more important meaning than any preceding Congress of the kind. Definite subjects will be discussed, such as Arbitration, Reciprocity Treaties, Cable and Steamship Communication, Banking Facilities, Uniformity of Classification in Tariffs and in Shipping, a System of Reporting Contagious Diseases, and like subjects of practical value.

The several Governments have each sent from three to five Commissioners, and the Congress numbers more than fifty members. They have, of course, no power to conclude treaties nor to do anything but to formulate recommendations to their several Governments of such agreements as they reach. But there is a tone of earnestness and a definiteness of expectation about it that no preceding meeting of the kind has inspired.

THE THIRD YEAR OF THE BOER WAR

THE third year of the South African War has begun with the British still fighting strong and the Boers not yet surrendered. In regard to the strategic positions in the theatre of operations and the nature of the tactics employed by both sides the situation today remains practically the same as it was a year ago, only the weight of the British army is slowly crushing down the Boer forces. How long the war will continue depends upon the endurance of the Boers in resisting the British weight applied in this crushing process.

This method of whipping the Boers by main force is the only possible one for the British to adopt. Field Marshal Lord Wolseley once said: "War in Africa is wait for the wagon." A general in the Boer army said: "Give us two hundred thousand men and let the British have thirty thousand and we would round them up in twenty-four hours." The British must always wait for

the wagon; the Boers will often round up a command of an equal size. During the history of the war sufficient proof has been given that in all matters of scouting the British are far inferior to the Boers. As it is of vast importance to a commander that he should know as much as he can about the movements, intentions, and position of the enemy, that the scouts should do efficient work is almost essential to success. The British knew little about the Boers; the Boers knew much about the British.

A knowledge of veldt craft is a great advantage to the scout in South Africa. This knowledge—or rather perhaps it is an instinct—is given to the Boer at his birth, and because of this instinct he understands under all circumstances how to take care of his horse, when to feed and water him, when to "off saddle" and let the sweat dry on his back, how to take care of the hoofs at night; understands how to conceal himself, taking advantage of every donga or dip in the land or bit of scrub to accomplish this; understands by the look of the road how large a force has passed by. Naturally the British soldier, being born and brought up in England, has been given no opportunity to learn such a craft. Often the British scout in consequence will ride up to the very crest of a hill to examine the surrounding country with his glasses. If there are any of the enemy in the neighborhood they are assuredly well hidden and he sees no one, whereas, standing on the skyline himself, he is the first object to catch the eye.

These two ways of scouting characterize in a general manner the two methods by which the Boers and the British are conducting their separate and apparently unending campaigns. In the meantime the political and financial aspects of the war are anything but cheerful to England. Lord Kitchener's proclamation of banishment, which has been executed against a few Boer leaders, has had no serious effect; for the Boers have made even more daring aggressive movements since that proclamation was issued than they had ever made before. The mystery of their continued supply of ammunition baffles the English. There is an ever increasing tendency to harsh criticism at home as the cost of the war grows with enormous strides. It has been pointed out that the Boer War has increased the English debt a fourth as much as the long Napoleonic wars. English consols have fallen in the market, and the worst of it is that nobody clearly sees the end.

A CHAPTER IN CHINESE HISTORY ENDED

THE signing of the protocol by the Chinese Government ended, or seemed to end, that tragic and confusing chapter in the gradual occidental advance on the East which began with the siege of the legations in Peking. With what credit the year of occupation of the Chinese capital was spent by Western troops—or with what discredit—Western civilization has already passed its judgment of censure for the methods and of approval of the aims. China was humiliated. Reparation has been demanded and made. Probably the definite speculations of the protocol are of little value except the agreement to pay the indemnity of $337,000,000. This the Powers can exact if it be not paid when due. The situation, then, is that China is mortgaged for the payment of this indemnity and for good behavior hereafter.

But the important question is what effect the whole incident will have on Chinese policy and history. The great jelly-fish nation seems not to have been greatly changed: it is perhaps incapable of change. The Court is reputed to be making very active preparations to return to Peking; but doubt is expressed whether it will ever return. Reform edicts have been promulgated with great frequency —with what sincerity nobody seems to know. Whether the progressive element of Chinese life will receive courage and an opportunity it is too soon to guess. Nothing seems certain so long as the Empress Dowager lives and holds the real authority. Trade, it is expected, will soon be revived in all the open ports of the Empire; and the increased influence of foreign Powers will after a time, no doubt, remove many of the old restrictions.

Doubtless a new day for China, in its relations to other Powers, will come; but it will come rather through the force that they will exercise till the indemnity is paid than through any interior change in Chinese character or methods. The day of the old seclusion is no doubt passed; but how fast the people will yield to modern occidental influences time only will tell.

There was lately published a most interest-

ing correspondence between the Emperor of Japan and the Chinese Emperor. The ruler of Japan in a friendly way frankly declared that China must, to keep the friendship and aid of the Japanese, break away from her old policy of seclusion. This programme the Emperor of China declared to be his dearest wish. Japan and the United States are in better positions than any other nations to help towards the further opening of the Chinese doors to modern influences. Our influence was won by the sheer force of honorable dealing.

PEARY'S NOTEWORTHY ARCTIC WORK

THE very noteworthy Arctic achievement of Lieutenant Peary has attracted far less public attention than many lesser discoveries and adventures have; for the work of explorers as of other persons must have a dramatic quality to win popular attention. We have, too, perhaps, become somewhat weary of Arctic news. No explorer will ever be able to send or to bring information that will be so eagerly received as Dr. Kane's book was a generation ago and Nansen's a few years ago. Nansen had gone "farthest North." That was a definite phrase. The popular mind saw in it one further step towards the final task that it now exacts of the next explorer in whom it will take an eager interest.

Yet Peary has done a very noteworthy thing. He has added information to our knowledge of Arctic geography of conspicuous value. He has surveyed the northern border of the great Greenland archipelago. He has outlined the coasts of the largest island in the world (except one small stretch of it); and the shape and extent of it is henceforth a part of geographical knowledge.

Other interesting things he has done also, but this definite contribution to Greenland geography is a most noteworthy event in exploration. He will make another effort to get nearer the pole next spring. Whatever success he meets with, he has already made a lasting record in the history of Arctic discovery.

THE NARROWING CIRCLE OF LINCOLN'S INTIMATES

THERE are yet a considerable number of men living who knew Lincoln more or less well; but the death of Mr. John G. Nicolay makes a conspicuous gap in the narrowing circle of those who knew him intimately. Mr. Hay is almost the only survivor of Lincoln's most confidential inner circle. Mr. Nicolay and Mr. Hay were his secretaries during his occupancy of the White House. They were happy in fortune and opportunity to carry out their well-laid plan of writing his biography, or the history of the great events of which he was the central figure. Their great work lacks the compactness and the charm of style—lacks a certain final quality —that some book about Lincoln which will some day appear must have; for it is the writing of contemporary historians. But it is and always will remain the great storehouse of information about Lincoln and his contemporaries; and it is a monument to the patient industry and the high loyalty of the men who wrote it. They have deservedly linked their names with the great name of Lincoln for all time to come, and for all time to come they have put historical students under obligations to them.

BISHOP WHIPPLE

WE have never bred a higher type of man than the late Bishop Henry B. Whipple of Minnesota. He won not only the esteem but the personal affection of almost every great personality in the English-speaking world during the last half century—from Indian chiefs to Abraham Lincoln. Born with a genius for bringing things to pass, he was sent as Missionary Bishop to the great stretch of the Northwest at a time when we had no Indian policy, unless war and neglect may be called a policy. For such progress as we have made in dealing with the Indians we owe more to him than to any other one man. They called him "Straight Tongue," and they named him well. He traveled among them and for them in his ministrations a greater distance than any soldier or explorer; and he stood for a full half-century of untiring work as the most enlightened, most just, most energetic man that had to do with them. Our debt to him on this score alone is incalculable. But he did a great work in other ways also. And in other ways he made a memorable career; for he was a large-minded, unselfish, commanding personality of heroic proportions Few such men come in any one generation.

THE NARROWLY WON YACHT RACE

THE most exciting yacht race of the whole fifty years and a victory by the narrowest margin—but we kept *America's* cup, with an even increased admiration for so good a sportsman and so manly a competitor as Sir Thomas Lipton. The winning of one race in the series by thirty-seven seconds, actual time, and of another by forty-one seconds, by the handicap time, was a narrowly won victory. But the experts agree that this was enough conclusively to prove *Columbia's* superiority to *Shamrock II.* It proves, too, the very perfection of skill with which she was sailed by Captain Barr.

Many Americans, of the temperament that prefers excitement to victory, have in recent years expressed the hope that the cup might be won by an English boat to vary the monotony of a long series of races that have ended the same way these fifty years. Others had lost the keen interest that they once felt in these races, because the yachts are mere "racing machines" and are not boats that are used or can be used for any other purpose. They are built for this single use; they are sailed by "professionals"; it is a contest chiefly between American and British yacht-builders, not between sportsmen themselves.

But since this very narrowly won race in October—the closest since the cup was won—the popular interest that was waning has again been excited; and the question is yet an interesting one—whether the English can build as fast a boat as the American builders.

THE CHARACTER OF CZOLGOSZ

THE trial, the conviction and the sentence to death of the assassin of President McKinley were conducted with satisfactory promptness and with impressive dignity. The Court assigned him most eminent counsel, the trial was conducted with due regard to all the prisoner's rights, and the several threats to lynch him were so well thwarted that his life was at no time in danger from violence. His demeanor showed a stunned or an undeveloped nature—perhaps both. He seems not to have thought out the consequences of his crime. He was bound to know that he would sacrifice his own life, but he seems not to have been aware before his trial of what such a doom meant. He showed nothing of the defiance of the mood that he was in during the early days of his imprisonment. In the courtroom his answers to questions were almost inaudible, and he displayed terror when there seemed danger that he might be lynched after his removal from Buffalo to Auburn.

There was something childish—an undeveloped, stunted intelligence—shown in his demeanor. His "philosophy" did not sustain him. He maintained, no doubt with truth, that he had no accomplices. The terrible crime was conceived by himself as the result of a naturally weak nature meditating on the doctrine of violence. It is probable that, if he had not happened to encounter an apostle of anarchy, he would have lived a commonplace, undeveloped life, without doing any act of violence and without developing any particularly vicious traits. There was nothing to show that he had any proper realization of the enormity of the crime that he committed. He was simply a pitiful victim of anarchism. But he was not insane, not irresponsible. He was only a degenerate. He gives the best possible reason for all judicious restraint on the preaching of dangerous doctrines. When they lodge in a weak mind like his there is always a grave danger of tragic results.

FARMING ON ABANDONED FARMS

THE thrifty Commonwealth of Massachusetts has for several years had the habit of advertising the abandoned farms in its borders. The latest catalogue of them recently issued by the State Board of Agriculture contains descriptions of 145 such farms, and the report makes known what luck the State had in selling them for their owners during the previous year. Applications were received for the previous catalogue from all parts of the world; but only 22 farms were sold. Yet during the last nine years 331 have been sold out of 746 that all the catalogues have contained. Most of them have been bought by residents of Massachusetts, and most of them have been bought for farming, a smaller number for homes and summer residences, some for investment and some for their timber.

The State seems to be succeeding fairly well in repopulating these abandoned places, most of which lie off railroad lines, of course;

and it is interesting that most of them are bought by persons who live in Massachusetts and who propose to make farming pay on the very places where it has been given up. But there is nothing startling in such a proposal; for farming depends nowadays much more on the farmer than on the land.

HAS INTELLECTUAL LIFE "UTTERLY DECLINED"?

PRESIDENT PATTON, of Princeton University, in an address to the students at the beginning of the academic year, suggested the most important subject in the whole range of academic work—a range wider than academic work in fact—when he said that we had suffered "an utter decline in intellectual life."

American life has undoubtedly drifted away from the intellectual ideals of the former generation, away from the old love of literature, away from classical studies. It is doubtful whether the present world of learning itself knows or cares for literature in the same spirit as the world of learning of a generation or two ago knew it and cared for it. Certainly it cannot even write our language with anything of the old charm. There is no teacher of literature in America to whose writings any audience looks as the cultivated public looked to Lowell's. The old kind of culture is, if not obsolescent, at least out of the fashion. If President Patton meant this by "the utter decline in intellectual life" he was right.

But would he not have been more accurate if he had said "a great *change* in intellectual life"? Is it not possible that the change, which cannot be disputed, may mean something less fatal than decline? Our intellectual pursuits have taken a new direction. When the excessive practical activity of modern life in America caught almost all men in its sweep, and when at the same time the fascinating and important sciences arose to claim fellowship with the "humanities" and came near to casting them out, there arose a sense of the incompatibility of the older studies. There is no doubt of that. The mere scholar has relatively lost influence, partly because scholarship withdrew itself from life and directed its energies to the scientific side of literary work—philology and the like. At one time at Harvard College, for instance, when it was very much smaller than it is now, half a dozen men wrote and spoke to the whole cultivated audience in America. Not one of our universities, every one of which has greater scholars and more of them than Harvard then had, can make such a showing today.

The pendulum will surely swing back, but it is an easy prediction that it will not describe quite the same arc in its backward movement. The old forms of culture seem to have a small chance of regaining the same relative position in intellectual life that they once held. But does it follow that the whole of intellectual life has suffered a decline? This question leads us into a region of such large tendencies that sweeping conclusions are easier to make than to make sure of. But no thoughtful man can fail to feel a sudden shock when he hears such a declaration as President Patton's, and he is likely to carry the question that it raises about with him for a long time in his reflective moods.

A LOOKING-OUTWARD NUMBER OF "THE WORLD'S WORK"

TAKEN in connection with present world-wide economic forces, the most interesting chapter in modern history is the expansion of the United States. We do not mean by expansion a thing that happened when we acquired the old Spanish colonies and then stopped, for geographical enlargement is one of the least important phases of it. In commercial, political and intellectual ways it is going on more rapidly every year. We are honorably winning foreign markets that were hitherto held by older countries, and we shall win more; and we are even invading these countries of the Old World themselves by our knack of doing things. We are extending our political influence, too, by reason of our extension of activity, and the intellectual horizon of the nation is rapidly becoming broader. The expansion is continuous. It has an increasing influence on our national character.

It may prove interesting to bring together a number of studies of this continuous expansion and to group evidences of our changed relations to other nations. This task will be undertaken in the January number of THE WORLD'S WORK, which will be a Looking-Outward Number.

A PLAIN DESCRIPTION OF TAMMANY

A FEW OF THE METHODS OF "BOSS" RULE IN NEW YORK

BY

ARTHUR GOODRICH

DOWN on old Chatham Square, a well-known Tammany heeler runs a joint. It is only one of half a dozen or more groggeries on the little Square, but it does a large business. It does a steady business, too, the same patrons leaning against the bar each day, unless there is a particularly large "graft" on that keeps a few away. For the gamblers and the street-walkers of the district all drink their liquor there and the proprietor is the reputed collector of police money for the district. It is only one example of the many ramifications of the political power that controls New York. This man can help the gang of gamblers, for he is in the organization. They must keep "right" with him. The district leader can do much for him, and he keeps "right" with the leader. The boss can make or unmake the district leader, and the leader keeps "right" with the boss. The heeler has a number of gamblers, the leader has a large number of heelers, and the boss has thirty-five district leaders. And up each step, compounding and multiplying with each series, money goes. The heeler "stands in" with his superiors, and his inferiors fear him. As one of the faithful, pointing to a blue-coat on the street, remarked proudly only the other night:

"He could have that cop transferred to Jamaica in an hour if he said the word."

So long as the heeler can "deliver the goods" he holds his power, and in the same way can the gambler below and the leader above him. With the dominating power in Tammany Hall money alone talks, except at election time, when votes must be polled so that the endless golden chain may not be broken.

The ways in which the steady tide of coin flowing into the treasury of the organization and into the pockets of the public servants is kept constantly at flood are endless. They may be separated into two divisions: the amount the organization can make the criminals and citizens pay them through fear, and the amount the members can make by the aid of their control of the city, and it is probably expected that any "good things" of the latter sort will profit the finance committee as well as the individual. And it is undoubtedly true that Tammany Hall profits much more by its leeching of others than by what it is clever enough to make directly in "jobs" and associated activities. The police department, because of its relations with criminals furnishes the most striking illustration of the means employed. The patrolman pays $300 to get his place. A well-to-do member of the force remarked recently:

"It's the best investment I ever made."

Many a man starts penniless and grows moderately wealthy in a few years on a small salary. Chief Devery is reputed to be worth $500,000. The patrolman is expected to get back the money the place cost him. So he levies petty blackmail here and gets a little there for closing his eyes when the saloon side door is open on Sunday. After a while he gets money to buy himself a place as roundsman. This costs him about $700. Here there is greater opportunity, but he is still grafting for himself. When he pays $3,000 or $4,000 and becomes a sergeant he finds himself within the workings of the system proper. It was when a man who later became powerful was an inspector that he organized the whole intricate plan by which there was a definite scale of payments for disorderly houses, gambling dens, opium joints, dance halls and the rest; by which the duties of the wardman were made to include the collection of these amounts to the exclusion of almost everything else; by which the various officers get their share of the results, together with many other details that the guardians of the law alone know.

How much profit it nets can be guessed from the fact that a captain pays $15,000 for his place. It is said that during a sickness a former chief insisted upon being literally carried to his office on a stretcher, for fear some of the gold might escape. The entire system is built up on the breaking of the law. Men going on the police force as it is today must recognize that the city pays them to see that the laws it has made are kept, and that the sentiment of the department, whose bidding they must obey, is not only to neglect the duty of arresting criminals, but to aid such criminals further to break the laws, and to become themselves partners to such law-breaking. The policemen who are honest—and there are such—are constantly seeing their companions grow rich by methods which they can adopt without effort. And the itch for easily earned wealth masters not a few. It was not a long time ago that a woman came to a well-known lawyer and told him how, although she had once kept a disorderly house, she had been trying for three or four years to lead an honest life; how she had obtained position after position, only to be discharged because policemen told her employers of her past; and how each time, when she was out of work, policemen came to her, advised her to go back in the business, and suggested localities which looked profitable. Thus for years she had been hounded to break the law by men who were hired to see that the law was kept. No one doubts that New York's police force from Devery down would, in the face of a mob, show splendid courage. But the force fears its political rulers more than it does a mob or the law, and under the influence of the Tammany doctrine, "Get money without being caught," the men have been demoralized to depths of sordid shame that are bottomless.

The results of the system of blackmail in the police department are that in certain parts of the city the stench of protected immorality is so strong that children are contaminated and ordinary decency is thro.vn to the winds; that there are, as a conservative man who has studied the situation carefully said not long since, upwards of 100,000 fallen women in New York; that laws are merely aimless words, and that police officers are the paid agents of criminals rather than of the law.

In the other departments, also, fees are demanded of the city's employees. Witness the case of Engineer Stuart of the Fire Department who, two years ago, refused to pay the expected fee which he had never been asked to furnish until Tammany came into power, who has been in these two years transferred nineteen times, persecuted in dozens of ways, kept at work fourteen hours at a stretch without food, has had humiliations heaped upon him, has been separated from home, and was finally dismissed because he was excusably absent a few minutes from duty, and because he was charged with assaulting a man whom he did not assault, and whom he proved he did not assault. Interesting, also, is the fact that five of Mr. Stuart's witnesses were strangely detained from giving testimony at his trial. If an employee of the city will not pay the requisite price, he must make way for one who will. If the city does a person the favor of allowing him to work for it, the fortunate person must ordinarily pay for the favor to the organization, or members of the organization in control. The clerks of the various departments either make their payments forthright or at a certain time are visited by the *wiskinkie*, or Tammany collector. The salaries which the city pays, therefore, must be rather better than these men can get elsewhere, or they intend to use their places for private gain. Men have been approached by persons who admit allegiance to Tammany Hall and have been asked if they wished to get rid of their taxes. And I am told of a man who, without knowing the means used, did get rid of his taxes one year through the forgery of a clerk inside the office. There is a building in the very heart of the town which is owned by the city and rented at a nominal rate to a district organization for colonization purposes. As a matter of fact, if the city could give the building away it would get more in taxes than it receives in rent.

The city often does large favors it is said for private concerns which are expected to turn in a cash value of the favor to the coffers of the organization which controls the giving of favors. In the letting of contracts for building there is a good illustration. There are papers in the Mayor's office now which relate to a man who refused to pay $2,000 for privileges, and who lost his contract by his refusal. Can there be any con-

nection between these papers and the fact that a commissioner, a superintendent, and an inspector have resigned since their filing?

In contracting for asphalt the new requirements are that accompanying the bids samples of asphalt should be submitted, and that no material would be considered that had not been tried on the city's streets for at least two years. As a matter of fact, no asphalt had been laid prior to two years ago, except that controlled by one company. The price of the material, of course, has grown considerably in size with the requirements of the contract. Can there be any doubt that the people who are responsible for the wording of the contracts profited with the company at the city's expense?

But the method by which Tammany has probably enriched itself most is accomplished by the civic indifference and cowardice of some of the leading men of the city. It is not the pittance that the disorderly house keeper is forced to pay that gives the organization its tremendous campaign funds, or its leaders $100,000 to bet on elections or race-horses; it is not the sordid, pitiful lower East Side that supports Tammany Hall, although it sweats blood to pay its little mite. It is rather the men of the upper West Side, many of whom will probably vote for Mr. Low, men who, like the gambler and the fallen woman, pay tribute for protection. I was told recently by one who knows that Tammany Hall will this year receive contributions amounting to between four and eight millions of dollars, of which it will not use, cannot use, more than a million. The statement seems extravagant but it cannot be doubted, considering its source. Down on Fourth Street at six o'clock, when the way should be clear for workers riding or a-foot on their way home, express companies' drays block the way. Around the big drygoods stores the same condition is repeated and thoroughfares are blocked. In busy streets, boxes and shipping-cases litter and obstruct the walks, and the people wonder how much is paid Tammany Hall for protection. From big trust companies and from little shopkeepers money probably goes to Tammany Hall. A builder, asked why he stood the levy, remarked, "I want to stay in business here in New York. I doubt if I could if I didn't pay the price." It is said that Croker does not bother with sums less than a thousand dollars. If the dominating faction in the organization had to depend upon its subordinates, even with the money it could force from criminals, it would have a hard road to travel successfully. It depends, therefore, on good citizens, believing that they, like the boss, are "working for their own pockets all the time."

The chief method by which officials use their positions directly for private gain, old as politics itself, is by their associating themselves with companies and influencing the giving of contracts to these companies in such a way that they, as individuals, receive large rewards in the shape of shares of stock, dividends, or bonuses. Sometimes the initiative is that of a private concern which needs aid at court, and is willing to pay for it. Sometimes it is done on the impulse of the office-holders themselves. In all this Tammany Hall by tradition is most proficient. The firms that have always sold fire department supplies are alleged to have had to pay a man a commission on these goods so as to accomplish their sales, and the expenses of the department have been estimated to increase $336,103. Real estate of which politicians have obtained possession may be bought by the city at exorbitant prices.

Money is the first thing for which a corrupt political organization like Tammany Hall works. Periodically it must obtain votes. Again the city is used as a means to the organization's ends. The appointees of the machine are those who can be used to keep the machine in power. Each district leader takes care of his following. If a man from "de Ate" is in authority in a department, there are usually more men from the eighth under him than from any other section. A large number of unnecessary employees are added to the force. Commissions that should cost the city $2,500 are said to cost it $15,000. Men in offices, if they wish to inform their neighbors, write letters to them, so as to keep busy, and large salaries are paid for little work. By thus favoring its adherents the organization binds them to it, and through them many others.

An almost unending number of questions may be asked. The common hydrant is more than large enough for the water-mains. Why, then, are double and triple hydrants necessary? Is it because they are more costly and

mean a larger "rake-off"? Are frozen hydrants, which cause many deaths by fire yearly, possible in a well-conducted department? The arrears in city taxes in 1899 were something like $13,000,000, and in 1900 $12,000,000. The payment of arrears during that period amounted to about $7,000,000, if my authorities are correct. What becomes of the other $18,000,000? Would it be possible, with the city's poor methods of bookkeeping, to cancel any of these for a consideration? How does it happen that the outlay for school maintenance has increased 58 per cent. in the pro rata cost since 1896—that interest charges amounting to $136,000 have been paid on school sites while condemnation proceedings were going on, and that in four years the Board has provided, with $18,000,000, only two-thirds of the seating capacity which resulted from equal outlays five years ago?

It is natural with all the deals in which the city is a medium for profit that the budget grows in size. The gross outlay of Greater New York in 1899 was $186,253,245. That of Chicago, Philadelphia, Boston, Baltimore, St. Louis, San Francisco, Buffalo, Pittsburg, Cincinnati, Cleveland, Detroit, New Orleans and Milwaukee combined was $176,715,862. These figures include, in all cases, the repayment of temporary loans. The real estate tax per square mile in New York was $236,118. Of these combined cities it was $93,722. In a single matter—the maintenance of pavements—New York paid two and a quarter times as much per given area as these thirteen cities. In nearly every department expenses have been increased at a wholly unnecessary rate.

More than this at present the city's accounts need to be systematized carefully. Under the present conditions, the entire expenditure of the city's money is made without a comprehensive public report. No intelligent attention is given by the men in office to the economy of this expenditure, and much money is doubtless wasted through lack of the application of thorough business principles in the city's accounts.

Whether the anti-Tammany fusion ticket is successful or not, the consequences of the Tammany régime will continue for a time at least. The taxes that the citizens will pay next year will be those assessed this year under the old administration's assessors. The contracts which have already been made must be carried out. The corrupt systems which Tammany has originated and fostered cannot be rooted out by a balance of votes merely. Any clean administration elected at any time after Tammany rule will be forced to reform many departments at considerable expense—schools must be built and supplies bought, police blackmail must be done away with, the city must be made decent, the games of political tricksters must be met and thwarted—all within the space of two years, and to the satisfaction of a critical public. Thus the Tammany system perpetuates itself over any short interregnum of attempted reforms.

Tammany Hall, then, as an organization, or by the individuals composing it, seems to be making money directly or indirectly at the expense of the citizens of New York, breaking laws, debauching the innocent, protecting criminals and making honest business men its partial source of revenue. No one can help admiring the remarkable organization which has made such absolute domination of all classes of the civic population possible, which has terrorized business men and criminals alike. It is probable that other political "bosses" would adopt many of Tammany's methods, if they could. Much may be said, also, for the many kind deeds that are done by leaders for the men and women they control, even if the doing has a political motive. It has been by this method, along with many others, that Senator Sullivan has gained his immense and loyal following. But the picturesqueness of Tammany does not excuse the consequences of its rule. It is the domination of a single man, whose moral sense seems forgotten. How long his authority will last is hard to determine, but a change at present would probably mean a transferring of domination to an absolutely unscrupulous man, much more to be feared than Croker, a man who, as some one has phrased it, "would stop at taking nothing except a red hot stove," a man who is a companion of gamblers, and outcasts.

It was the advance of civilization that drove the pirates from the seas. Perhaps the movement, which will eventually put Tammany Hall's piracy out of existence, will be the civilization of cities.

THE PROPOSED APPALACHIAN FOREST RESERVE

THE SAVING OF THE STREAM-SOURCES DEMANDED BY PUBLIC SENTIMENT, BY SCIENCE AND BY HEALTH—THE ONLY METHOD OF PRESERVING THE MOST ATTRACTIVE SCENIC REGION IN EASTERN AMERICA

BY

DR. W J McGEE

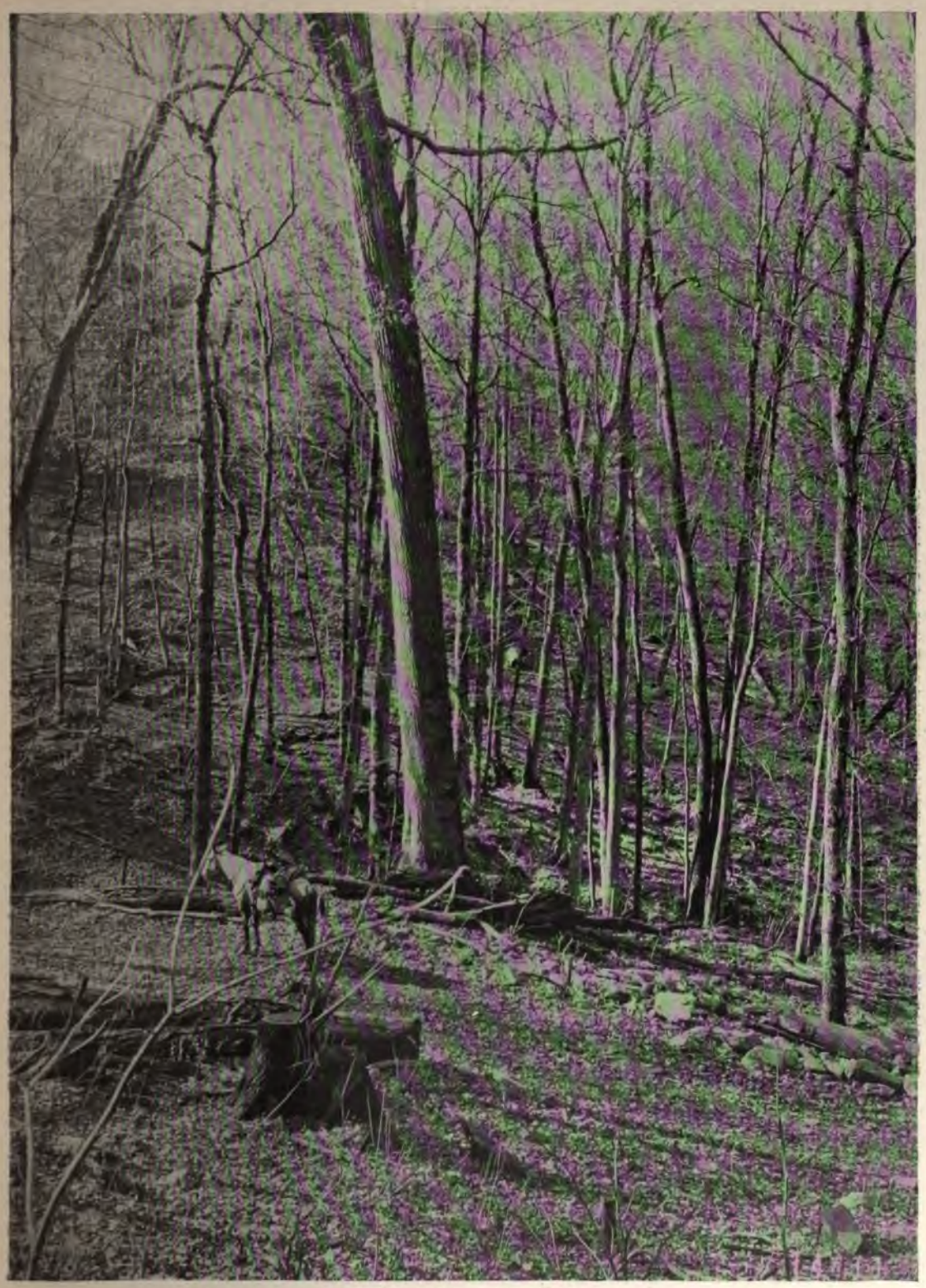
ETHNOLOGIST IN CHARGE, BUREAU OF AMERICAN ETHNOLOGY; VICE-PRESIDENT NATIONAL GEOGRAPHIC SOCIETY

THE Appalachian Mountains are unique among the mountain systems of the globe. Seeming pigmies at first sight, they are the gnomes and brownies of the mountain world, for they have brought up to the surface the secrets of the inner earth, and have aided in the making of earth-science more than any other range or group. The Appalachians rank among the longer orographic systems of the globe, stretching as they do a thousand miles from Central Alabama to Southern New York. Dozens of crests rise more than a vertical mile in height to culminate in Mt. Mitchell, in North Carolina, at 6,711 feet above sea level; yet the striking external feature of the Appalachian system is the unequalled length and regularity of the constituent ranges, with the marvelously symmetric corrugation of the rocky strata revealed in these ranges.

To the geologist, who reads between lines and peers into the depths of rocks and of past time, the Appalachian region is of still deeper interest as a record of earth-making; for, just as the high mountain is the young mountain on which storm and river have not yet spent their strength, so the low mountain is a wrinkled ageling whose furrows tell of the storms and rivers of eons. Here a score of rivers carved mile-deep canyons—and then attacked canyon walls and divides, and at last carried the whole plateau down to the sea. The vast measure of erosion attested by Appalachian rocks and ridges draws hard on the powers of definite thought; but Mt. [illegible] piercing the sky at 29,000 feet, depict the Mt. Mitchell of the early period, with two to five vertical miles of rock above his present 7,000 feet of granitic schists. To the reverential geologist the Appalachians are as the Book of Revelation.

While the student revels in the rock-lore of the Appalachian region, his fellows delight in its scenic features. The fertile valleys billow with lofty forests as do the midland prairies with grass or grain, or break into tangled wildwood about the rockier spots; as Professor J. A. Holmes, who knows well, wrote in *The Forester* for July, 1900: "In the cool moist coves the hardwood forest trees reach their maximum development; oaks from five to seven feet in diameter, chestnuts still larger, and tulip-poplars from six to ten feet in diameter are associated with beeches, birches, lindens, maples and numerous other species which have found conditions most favorable to their growth." On the higher slopes these give way to the chestnut-oaks and hemlocks, and these in turn to the balsams and the firs, while the nooks are festooned with laurel, the lush soil is carpeted with ferns, and the rock walls are tapestried with lichens. The whole land is redolent of rhododendron and breathes of balsam. The very air is a delight; kept astir by the trade currents over the ranges, it pulsates with life, invigorating and toning animal life as the living waters sustain and enrich floral life. Such was all the Appalachian region in days primeval, before the coming of Columbus and his nature-conquering followers; and such are the central districts amid the higher ranges today.

These are nature's resting places against the deadly pressure of urban life. But



AFTER TWO CENTURIES

Mammoth chestnut oak in Unicoi County, Tennessee. Two hundred years old

twenty-four hours from New York, and less than twenty from Washington, trains pass the station from which Mt. Mitchell (the highest point of Eastern North America) may be reached by a few hours' easy journey through a succession of entrancing prospects. What a journey it is! Over undulating uplands shadowed by noble peaks, meandering amid forest giants, splashing through rippling trout brooks to the final mountain base; then up embowered slopes past welling springs, back and forth in zigzags across the steeper faces, along narrow crests caressed by balsam boughs, fed, filled, drunken at every step with the sweet air of mountain-land! The experience is worthy of long seeking and longer remembering. Then the sight from the summit—the bold but balsam-clothed peaks in the foreground sloping down to buttresses in shadowy valleys, and the surflike ridges in the background stretching away in vanishing panoramas of earth-waves—earth-waves too many and too softened by distance for the camera to catch. And Mt. Mitchell is but one of a hundred crests of the central Appalachians; the breathing ground is big enough for all—if only it be preserved.

EROSION ON A STEEP HILLSIDE

While the geologist delves and the botanist gloats and the artist revels amid Appalachian ranges, the modern geographer—the student who seeks to assimilate the substance of all science—cons a lesson of his own. Perceiving

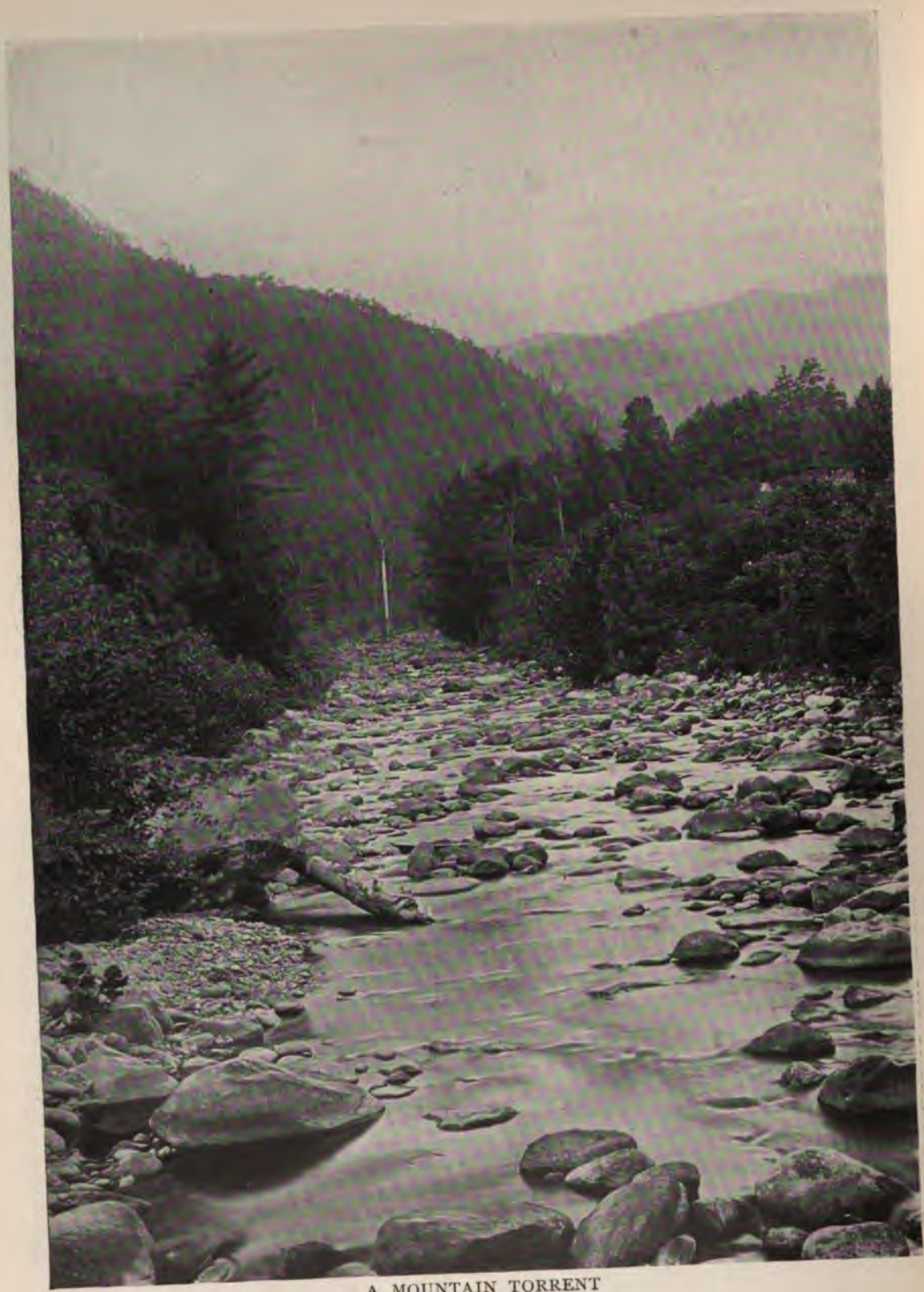
that in the depths of the wilderness the streams flow steadily the year round, with but trifling freshets after the rains and scarcely perceptible shrinkage in summer, and perceiving, too, that the rivers are as clear as spring brooks, he contrasts the soft-profiled valleys with the torrent-swept defiles of rugged ranges, or with the swift-changing valleys washed by vernal floods from melting snows; and he is driven to realize that in this region, mountainous though it be, the processes of erosion are feeble and slow. Then as he watches the passing storm or the all-day pour—and in this humid land such opportunities come often—he cannot fail to perceive that its effects are unlike those of the open plain or of the rugged range. The heavy drops never reach the soil to batter it into mud and sand-grains, for they are themselves battered by leaves and twigs into sifting mist or into sluggish trickles down branch and trunk. Nor can he fail to note the absence of rills and rivulets to gather disrupted soil matter and to carry it through ever-growing runnels and gullies into storm-swollen streams; for the rain-mist settles softly on mossy or ferny carpet, to be partly held as in a sponge and partly led in trickling lines down the rootlets deep into the soil. Here the work of the storm is to wet and not to wash the soil; and the storm-water lies long to nourish the moisture-loving herbage, while the residuum seeps along the

Photographed by R. H. Scadin

"THE RAIN-MIST SETTLES SOFTLY ON MOSSY OR FERNY CARPET"

A FAMILIAR SIGHT IN WESTERN NORTH CAROLINA

Erosion has followed the clearing of land which could be of value only under forest



A MOUNTAIN TORRENT

Bed of Big Creek, near Sterling, North Carolina

deeper roots and finally soaks into and through the sub-soil to accumulate in a vast reservoir of ground-water, a veritable mountain of liquid within the mountain of rock—for all rocks and earths are porous, holding water like a fine-texture sponge, allowing it to percolate slowly downward and permitting the excess to escape through chance openings.

So the geographer may turn a leaf in his reading. He perceives that in the wooded wilderness Nature provides a vast reservoir system for the storage of storm-waters—a system at once so perfect and so economical that all the year's rainfall (and light snowfall as well) is first appropriated to the uses of plant life, then conserved for a time in the sub-soil against drought, and finally carried by subterranean seepage to the lower levels, where only the excess above local plant needs and animal demands is allowed to flow through spring and stream and river down the long way to the distant ocean.

Turning back now to his first lesson, he perceives why erosion is sluggish, dormant, all but dead, even on steep mountain slopes. He realizes that the mantle of Flora is a protecting garment against which storms beat helplessly. Now he may turn another leaf to the closing lines of his lesson and read of that delicate interrelation of natural conditions which has resulted throughout the Appalachian region in the development of a floral mantle to stay the storms, and thus at once to sustain the flora itself and to estop destructive erosion. These final lines run deep into earth-science and into plant-science, and need not be followed save by the specialist. Yet the ultimate axiom is simple, so simple that he who runs might read, so simple as to make it a marvel that observant men did not grasp it at the beginning of knowledge rather than wait until the end—it is the simple axiom that life prevails over death, that plant power is stronger than rock power. Nor can the geographer in the Appalachian region fail to apply the axiom. He may call the application theory, argument, policy, cause; he may whisper it in private

WHERE THE LUMBERMAN HAS NOT COME

POOR ROAD-MAKING
Washed out by heavy rains

A DEADENING
Girdling trees to clear for a corn-field

RHODODENDRON
Summit of Cheowa Bald Mountain in North Carolina

council, may announce it in scientific conclave, may proclaim it in legislative halls, may send it ringing through the world and up the corridors of future time to benefit all mankind; he may smother it cravenly in coward breast or he may sacrifice it to paltry greed—yet if he is honest with his facts and with himself he cannot fail to realize that *the forest must be preserved, else the mountains will be destroyed.*

Only a generation ago science plodded wearily along one side of the pathway of human progress, while statecraft flitted airily along the other side of the straight and narrow path, both led in part by hereditary theories. But within the worktime of men now living, science and statecraft have drawn well into the main pathway of practical humanity, and, in this country at least, they have joined hands firmly; today science stands in the federal cabinet in all the dignity of an executive department, while the leading statesmen are grasping that modern geography which seeks to assimilate science. So it is but natural that the mountaineers of the Appalachian region—a virile and far-seeing race—

and various representatives of public interests have come to read alike the public lesson of conservation, the conservation of forests in order that the very mountains may be conserved. Naturally, too, the applications of the lesson first came home to the hearts of the mountaineers amid their beloved ranges and rivers. *They* first noted the gullying of hillsides, with the accompanying loss of soil and clogging of valleys and polluting of streams, when clearings were pushed too far up the valley-sides. *They* first observed that the carelessly-set forest fire produced, although more slowly, effects as disastrous as those of

Photographed by R. H. Scadin

THROUGH THE NORTH CAROLINA FOREST

GRANDFATHER AND GRANDMOTHER MOUNTAINS CAUGHT IN STORM-CLOUDS

TYPICAL WOODLAND OF NORTH CAROLINA

Grandfather Mountain in the background

injudicious clearing. *They* first noticed that reckless lumbering robbed the land not merely of trees but of soil, of welling springs, and of the trout-filled brooks—which were converted into muddy, freshet-ridden streams, running dry in midsummer. *They* first realized that the stripping of the chestnut-oaks for tan-bark was but the first step in a cumulative desolation. *They* were the first to realize the gradual change of brook and river from crystal streams flowing steadily all the season round to dirty danger-lines mapped out by disastrous wrecks with every storm, only to lose themselves in mud between storms. Naturally, then, the agitation of a policy began among the mountaineers; and their voices were heard first in local conventions, then in the legislative halls of several States, and finally before federal congress and cabinet. Such, in brief, is the history of the movement toward an Appalachian Forest Reserve, a movement which may lag or lunge according to the firmness of the alliance between science and statecraft, but which is manifestly destined for ultimate success—to the immeasurable benefit of mankind.

The Forest Reserve movement began in a small way in a dozen centres from three to ten years ago. In general the first idea was for local correction of a local evil; but, as movers met and exchanged ideas, the magnitude and extent of the evil were gradually forced on them. Motives spread and interlocked in a web hardly less complex than that of natural interrelation on the wooded mountain-side—indeed, the growing thought of the human conserver came to reflect faithfully the natural features and conditions. At first some thought only of saving the soil from washing, others only of preserving the purity

Photographed by R. H. Scadin

"APPALACHIA'S FAIR FOREST-LAND"—FAIRFIELD, N. C.

THE EFFECT OF FIRE AND GRAZING ON A CHESTNUT RIDGE

WHITE PINE ALONG LITTLE RIVER IN TENNESSEE

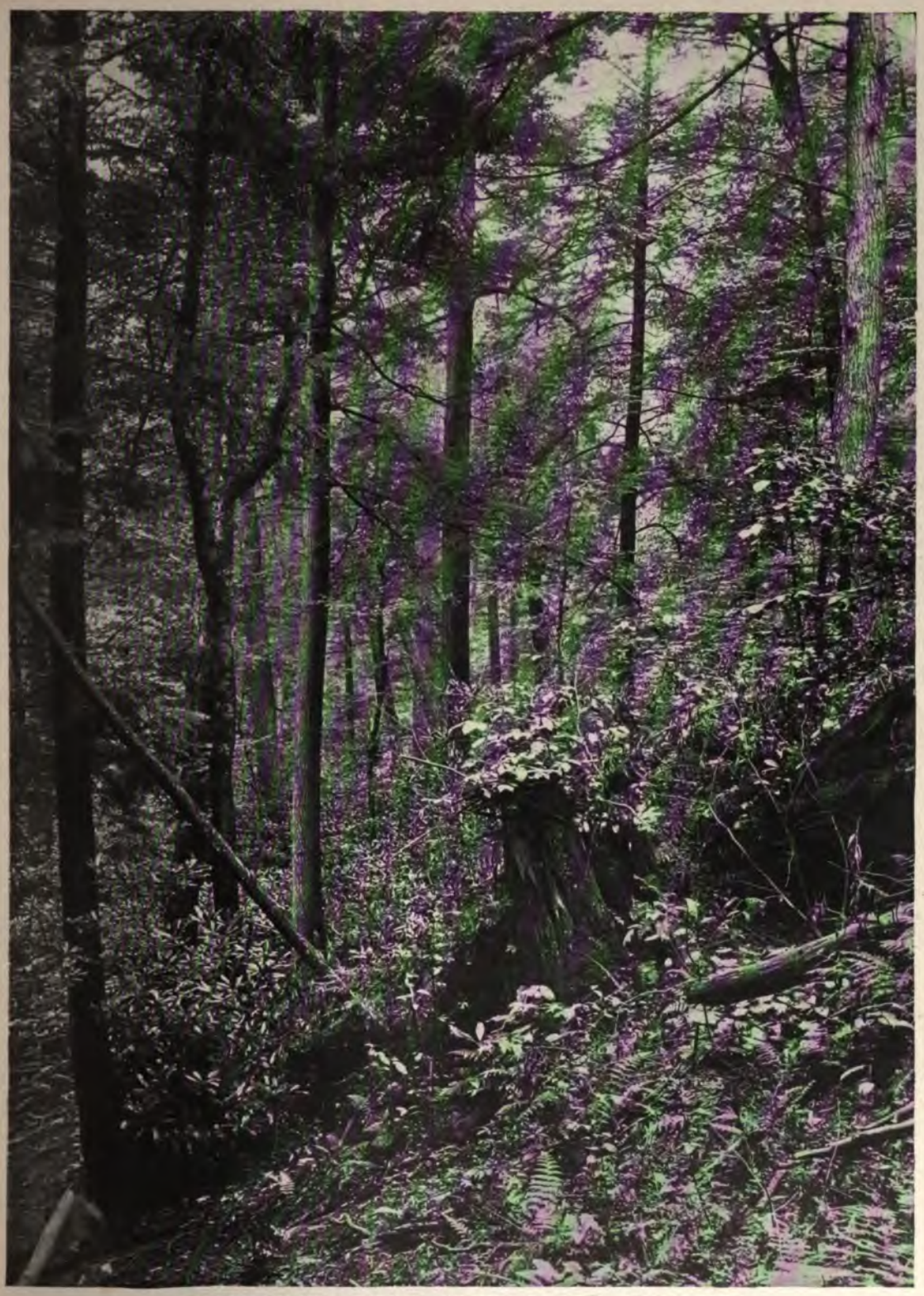
and strength of the springs, still others only of maintaining the uniform regimen of the trout-brooks and rivers; but when whole States were enlisted, the ideas were necessarily combined, and now that the States have appealed for national sympathy and support, the objects and problems have become still broader. Some of them may be specified:

1. The clearing of the forests is impoverishing the mountain region. The lesson that a mountain-side farm, cleared at a cost of $20 an acre, will yield but two to five crops before the soil is washed and leached away, and that these crops will bring no more than the cost of clearing, is learned so slowly that thousands of farmers are annually forcing themselves into poverty, wrecking their own noblest ambitions, and ruining all but the choicest spirits of their families. This disastrous policy should be modified by educational and other means.

2. The lumbering industry requires regulation. As commonly conducted it is destructive, short-sighted, alien—destructive because both mature and immature trees of both profitable and unprofitable varieties are cut and slashed indiscriminately; short-sighted because the average lumberman never dreams of a second crop; alien because most of the mill owners are non-resident, and merely move from cove to cove and county to county in the hope of immediate profits to be carried into distant States and expended in distant cities.

3. The springs and brooks are drying up. Hundreds of the mountaineers keep crude calendars of their careers in terms of springs gone dry, of trout brooks ruined, of the annual withdrawals of pure sweet water further and further into the mountain fastnesses. These immeasurably valuable natural resources cry out for protection.

4. The regimen of the rivers is at stake. With every square mile of deforestation a square mile is appropriated to flood-gathering during storms and to desiccation between storms; and as one drainage basin after another is devastated, one torrent-feeder after another is produced. The changes of the last half century are surprising, those of the last decade appalling; during the first half of 1900 the destruction of railway property alone by floods in the central Appalachian region actually ran into millions—and this in valleys that were practically floodless two-score years



CULLED MIXED FOREST, SEVIER COUNTY, TENNESSEE

A HUGE CHESTNUT IN NORTH CAROLINA
Over eight feet in diameter at the butt

ago. Unless the floods are soon controlled, the facilities for transportation, and indeed for other industries, must be reconstructed—or abandoned.

5. The public health is at stake. The crystal springs and sparkling streamlets and pellucid rivers of a quarter-century past rendered the Appalachian mountain region one of the best-watered sections of the country, and malaria and typhoid were practically unknown; but already the same pollution of the waters that destroys the finny denizens poisons the human population, and has often introduced fatal diseases into once-salubrious valleys.

6. The future of the entire mountain region hangs in the balance. With a deforestation during the next half-century no greater even than that of the last, the floral mantle would be rent beyond repair save by stupendous efforts through several generations. All natural processes are cumulative, so that while slight lesions may help to heal themselves, grave wounds introduce chains of destructive complications; and when the relations are so delicate and far-reaching as those between mutually protective soil and flora, even a moderate derangement initiates far-reaching disturbances of equilibrium. Each acre of clearing changes the grades moulded during a millennium of sluggish erosion, incubates a torrent-nest from which myriad talons invade the soil of the next higher zone, and starts a train of soil-impoverishment toward neighboring valleys. All observers are agreed that the stage is critical, that a natural resting-place of the nation, a region of rare scenic charm, a breathing place big enough for a hundred great cities, is on the eve of conversion into a sterile waste. It would seem to behoove every thoughtful citizen, more especially in eastern United States, to extend practical sympathy to their fellows of a region so portentously threatened.

The problem of the Appalachian forests is by no means a local one. As recently expressed by the Honorable Secretary of Agriculture, these superb forests of hardwoods and conifers are the nurses of all the rivers of southeastern United States. Within the critical region waters gather to flow northward as

RIVER BIRCH ON BOTTOM LAND

far as the Potomac and the Ohio, westward through the Ohio and the Tennessee and thus to the Mississippi, southward through the Mobile, the Chattahoochee, and the Savannah, and eastward through the Santee, the Yadkin, the Roanoke, and the James. The pollution of these waters will endanger health in every city from Washington and Cincinnati on the north to Cairo and Memphis on the west, to New Orleans and Mobile on the south, and to Savannah, Charleston, and Norfolk on the east. The industrial consequences are still farther-reaching; and there remain those innumerable social and esthetic factors which appeal most strongly to the sensibilities, and cry out for the preservation of one of the world's most attractive mountain-lands.

Thousands of residents of the Appalachian region have sought to stay deforestation with its train of evil consequences. Many have purchased woodlands merely to protect them from reckless lumbermen. Others have so located homesteads and parks as to stay invasion. Hundreds are united in associations created to diffuse correct information and to develop healthy public opinion. Yet the majority of the mountaineers have settled down to the conviction that the problem is one demanding public action, public ownership, public control on behalf of the whole people. Nor is this opinion hasty or ill-considered; it has been voiced by hundreds of county and state officers, by scores of influential editors, by numberless conventions, by resolutions of at least half-a-dozen state legislatures, by unqualified recommendation on the part of a cabinet officer, and by favorable preliminary action in the United States Senate. Such is the present status of the proposed Appalachian Forest Reserve.

It is an early lesson of modern geography —whether the student be statesman or scientist in the first instance—that life prevails over death, and that plant-power is stronger than rock-power. Yet there are later lessons which give ground not merely for hope but for expectation to those who plead for the preservation of Appalachia's fair forest-lands—for animal-power is stronger than plant-power, and mind-power is stronger still and must at last prevail to the ends of human welfare and pleasure.

A TYPICAL MOUNTAIN SAW-MILL
Deforestation going on in the background

BARON K. KANEKO

President of the America's Friends Societv of Japan

JAPAN AND THE UNITED STATES

THE ERECTION OF A MONUMENT IN THE ISLAND EMPIRE TO COMMODORE PERRY, BY THE AMERICA'S FRIENDS SOCIETY —THE CORDIAL APPRECIATION OF THE JAPANESE GOVERNMENT AND PEOPLE—AN INTERESTING HISTORICAL EVENT

BY

MIDORI KOMATZ, M. A., LL. B.

SECRETARY OF THE JAPANESE LEGATION AT WASHINGTON

OF all the events incidental to the early intercourse of Japan with foreign countries, there was none that made a more profound impression upon the Japanese people than the landing of the American envoy at Kurihama nearly half a century ago. The name of Commodore Perry has ever since been a household word. Every Japanese, whether Cabinet minister or Parliamentary orator, judge or barrister, professor or student, who happens to talk about the happy dawning of our modern civilization, always alludes to the first visit of the great Commodore. He it was who first unhinged the long-closed doors of the Island Empire; and the United States, through him, secured the establishment with Japan of a treaty of friendship and trade which was to form the initiatory step in the introduction of the latter country into the circle of commercial nations of the world. He was, moreover, the harbinger of the blessings of the western civilization, through the wise utilization of which Japan has, in a comparatively short period, come to hold a position among the family of great Powers. It is not surprising, therefore, that his name has become the synonym for the inauguration of the new era in Japan, and is identified with the starting point of our present progress. In short, the history of modern Japan literally begins with the advent of the American envoy on the shore of the Empire.

It was toward the end of October last year that the Japanese people were happily surprised by the unexpected, though per-

HIS IMPERIAL MAJESTY MUTSUHITO

The Emperor of Japan

MARQUIS HIROBUMI ITO

Ex-Premier of Japan

fectly welcome, reappearance of Rear-Admiral Beardslee, a survivor of the officers who came with the famous Commodore on the epoch-making visit to Japan. The return of the Admiral after the lapse of nearly half a century was an occasion which instantly revived the precious memory among the elder men who might possibly have witnessed the strange and colossal black vessels as they were hanging about our coasts, and which also afforded to the younger generation a living evidence of the memorable event marking the transition from the old to the new Japan. The venerable sailor at once became an object of national interest. He was, as he wrote to the Navy Department of the United States, really "inundated with calls of ceremony and attentions." Their Majesties, the Emperor and the Empress, were not slow to show their gracious appreciation of his services of bygone days by bestowing upon the Admiral and his wife the honor of an audience. Societies and individuals of high standing in social, political and business circles vied with each other to express to the couple their generous sentiments of welcome. A round of festivities and entertainments succeeded, which culminated in a grand reception given in their honor at the magnificent park of Uyeno, at which Admiral Marquis and Marchioness Saigo acted as host and hostess. Nearly three thousand assembled in the garden, including Cabinet ministers, Diet members, Military and Naval officers, and other prominent personages. Addresses and speeches were delivered, all referring to the memorable visit of the American envoy, whom the guest had accompanied as a cadet forty-eight years ago.

Meanwhile, Admiral Beardslee hastened to pay a visit to Kurihama, the very spot where he landed with his chief, who met there the representatives of the Shogunate Government and formally delivered to them the message from President Fillmore, which served to bring the two nations into friendly intercourse. "I found and recognized it," said he in rather mournful tone, "but I found it by the natural scenery alone, desolate and neglected, not a mark of any kind to denote its historic value." This fact, however, should in no wise be attributed to any sentiment of ingratitude or indifference on the part of the natives. The custom of commemorating great names by the dedication of statues or monuments had not been in vogue in Japan until quite recently. And even then there were many native heroes, whose meritorious deeds in connection with the Imperial restoration of 1868 claimed the most urgent attention of the populace. However, the project of immortalizing in some way or other the important visit of the first foreign benefactor of Japan was in the minds of the intelligent natives. Especially among the members of the Bei-Yiu Kyo-Kwai (America's Friends Society), repeated propositions touching on the subject had been brought into consideration; and the only cause that had so far prevented the enterprise from being carried into effect by the Society was the doubt of raising a sufficient sum for its successful execution. It was at one of the meetings held by this very society that Admiral Beardslee made his first address on the subject.

AMERICA'S FRIENDS SOCIETY

It may not be improper to explain briefly the character of this society, of which I can claim the honor of being one of the chief promoters. Soon after my return home from seven years' sojourn in the United States, being profoundly impressed by its marvelous progress in every branch of civilization, I laid before a number of my friends who had also been in the United States a plan for organizing an association with a view to the promotion of more intimate friendship among those who had visited the great Republic for the purpose either of prosecuting certain studies or observing the actual state of the wondrous nation. This was five years ago. After having undergone such vicissitudes as are attendant on all nascent organizations, we at length succeeded in bringing our association into formal existence under the name of America's Friends Society. We were soon gratified to find in the list of the members the names of high Government officials, Parliamentary representatives, college professors, and other prominent individuals of various professions. Baron Kentaro Kaneko, then the Minister of State for Justice, was elected president of the society. He had graduated from Harvard some twenty years ago, and only recently received as well the honorary degree of LL.D. from the same American University.

THE ORIGIN OF THE MONUMENT PROJECT

The society, in response to the earnest appeal of Admiral Beardslee, heartily resolved to take up the enterprise of erecting a monument that should perpetuate the landing of the great Commodore in the memory of our posterity. Admiral Beardslee was informed that his long cherished hope would soon be realized and the historical spot would cease to be unmarked.

Baron Kaneko immediately issued the following circular invitation for subscription, which was generously responded to by the natives, a few Americans joining them in the list:

"Forty-eight years ago, on the 14th of July, 1853, an American envoy arrived in Japan on a mission which was destined to become an epoch-making event in the history of Japan. This envoy was none other than Commodore Perry, U. S. N., who by order of the President of the North American Republic, came to this country for the purpose of concluding a treaty of commerce and friendly intercourse between the two nations.

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"True, Japan has not forgotten—nor will she ever forget—that next to her reigning and most beloved Sovereign whose high virtues and great wisdom are above all praise, she owes in no small degree her present prosperity to the United States of America in that the latter rendered her great and lasting service. . . . After the lapse of these forty-eight years her people have, however, come to entertain but an uncertain memory of Kurihama, and yet it was there that Commodore Perry first trod on the soil of Japan and for the first time awoke the country from a slumbrous seclusion of centuries—there it was where first gleamed the light that has ever since illumined Japan's way in her new career of progress.

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"Last fall we had the pleasure of meeting Rear-Admiral Beardslee, U. S. N., who as a naval cadet and a member of the crew under Commodore Perry, landed at Kurihama on the historical occasion and who after nearly half a century once more came back to pay a visit to this country. Beckoned by the memories of the past, the admiral went to Kurihama immediately after his arrival in Japan, but he was only able to ascertain the spot where the envoy and his party had landed forty-eight years ago, by the help of an old survivor of those bygone days. We were greatly moved by his account of his second visit to the place, and we immediately set on foot a movement to erect a fitting monument which may perpetuate the place in question in the memory of our posterity. It is our determination to accomplish the end in view with all possible promptitude and to hold the ceremony of unveiling the monument on the coming anniversary of the landing of the American envoy at Kurihama, the 14th of July, this year. We hope, therefore, that those who are interested in the matter will favor us by indorsing our undertaking in a substantial manner.

"BARON KENTARO KANEKO,
"President of America's Friends Society."

THE DEDICATION OF A MONUMENT.

The friendliness of the Government and people of Japan to this country was never, perhaps, more strongly emphasized than by the erection of a magnificent monument and the ceremonies of its dedication. The monument stands on the exact spot of the landing of the American envoy, and it was unveiled on the 14th of July last, the forty-ninth anniversary of his first appearance in Japan. Five warships of Japan were present for the special purpose of taking part in the celebration. The Minister-President of State, the first official of the Emperor, delivered the memorial address. Marshals, generals, admirals, and several cabinet officers were present, and other personages of high rank and standing attended the ceremonies in a great mass, in spite of the heavy rain which had, unhappily, begun to fall in the morning. At one o'clock in the afternoon the monument was unveiled conjointly by Baron Kaneko, President of America's Friends Society, and Rear-Admiral Rodgers, U. S. N., a grandson of Commodore Perry, who had been despatched by the United States Government with the flagship New York and a squadron of three vessels. At this juncture salutes were fired by the men-of-war, both Japanese and American, followed by the lively airs of the American national anthems.

Then President Kaneko, representing the promoters of the enterprise which had just been completed, cordially expressed his gratitude for the gracious interest which His Majesty the Emperor was pleased to take in the undertaking in a substantial manner, and his profound gratification for the courtesy of the United States Government in sending the fitting representative to be present on the occasion. He was followed by Premier-General Katsura, Admirals Rodgers and Beardslee, Governor Suwa, and Colonel Buck, Minister Plenipotentiary of the United States to Japan,

with the most appropriate speeches, all dwelling upon the happy relations existing between the two nations.

JAPAN'S FOREIGN INTERCOURSE BEFORE PERRY

Commodore Perry was the first foreigner to whom the honor of having introduced the once secluded empire to the world should be accorded. But nothing can be farther from truth than the presumption that no aliens had ever set foot on Japanese soil before the famous landing of the American expedition. A number of adventurers from Portugal had made their appearance in Japan even as far back as the middle of the sixteenth century, when that country had attained the highest fame in commerce and navigation. They were soon followed by the Jesuits, who made strenuous efforts to convert the natives to Christianity, but whose indiscretion, pride, and avarice presently made of themselves objects of popular disgust, and finally caused their expulsion from the land, to the great detriment of successful introduction of the western religion to Japan. Then came the Dutch, who first reached Japan in 1600. They were principally traders, and seem to have behaved very amicably toward the natives, inspiring in them unreserved confidence. It was indeed only the Hollanders who were permitted to retain the privilege of commerce and residence in Nagasaki, notwithstanding the proclamation which was subsequently issued prohibiting all aliens to come to Japan. From them the Japanese received instruction in the sciences of various subjects, especially of medicine, which contributed in no small measure to the subsequent development of the national life.

Nine years before Perry's landing a Dutch envoy visited Japan and addressed a royal message to the Tokugawa Regency, presenting maps and works on geography, astronomy, chemistry, etc., together with firearms. In the message the necessity of opening Japan for foreign trade was strongly represented, warning her of the danger of adhering to the policy of complete seclusion, which might very likely furnish occasion for an unpleasant rupture with the allied Powers of Europe. Many times afterward this counsel was repeated by the Dutch residents in Nagasaki. Among the natives, however, only a few individuals who had studied the Dutch language and acquired, through it, certain knowledge of western affairs were in favor of a liberal policy with respect to foreign intercourse; but the bulk of the nation was strongly opposed to any lenient measures toward the aliens, the prejudices engendered by the violent and lawless conduct of early Jesuit propagandists and various encroachments of the Russians in the beginning of the nineteenth century still remaining in the memory of the people as strongly as ever.

PERRY'S SUCCESSFUL MISSION

Meanwhile an English squadron had made its appearance at Liu-Chiu, and French warships had also made their way to Nagasaki, followed by the American men-of-war in Uraga, all seeking to establish trade relations with Japan. But the government stood immovable and boldly ignored all their proposals, compelling them to leave the country without accomplishing anything at all. Thus the honor of effectually opening the doors of the hermit empire was reserved for Commodore Perry.

It was on the 14th of July, 1853, that the American envoy formally presented to the representatives of the Tokugawa Regency the message from President Fillmore, together with specimens of the products of the United States, and he made strong application that commerce should be permitted between his country and Japan. There can hardly be any doubt that he would have suffered no better fate than that of preceding suitors but for the rigorous attitude and skillful diplomacy by which he managed to induce the Shogunate Government to entertain the proposal and give a definite reply the following year. Full of confidence in his eventual success, the Commodore sailed away, declaring that he would return the next year without fail.

The Shogunate Government immediately summoned a council of feudal lords in order to consult about the steps that should be taken with regard to the proposition made by the United States envoy. The documents brought by Perry were shown to the feudal chiefs, and his visit to Uraga on the important mission was reported to the Emperor in Kyoto through the proper channel, which proceeding testifies what grave interest the Shogun had taken in the matter.

PERRY'S SECOND VISIT

Faithful to his promise, Commodore Perry once more made his appearance at Uraga in

January of 1854, and urgently demanded a reply to the proposal which he had made in the preceding year. All the feudal barons, almost without exception, were of one mind in advocating the old policy of seclusion; but the chief officials of the Tokugawa Government, being better informed of the real situation, were astute enough to see that such a policy was, under the circumstances, only next to an impossibility. In spite of the strong opposition of the barons, and without waiting for due sanction of the Emperor, the Regency decided to conclude a treaty of amity and commerce, providing therein that all American citizens driven to Japan by stress of weather should be kindly treated; that American ships of war should be supplied in Japanese ports with fuel, coal, provisions and other necessaries, and that the two ports of Shimoda and Hakodate should be opened to American trade, which subsequently extended to four other ports, when Shimoda ceased to be a trading port. Other conventions virtually similar in terms were soon after signed with Russia, France, the Netherlands and England.

THE DOWNFALL OF THE FEUDAL SYSTEM

This high-handed transaction on the part of the Shogunate Government immediately aroused no small indignation among the powerful feudal Lords, and in greater degree among the class of Ronin (freed liegemen) who had already begun to doubt the propriety of confiding the supreme power in the hands of the Shogun. The latter (Ronin) raised a flag with the motto: "Loyalty to the Throne and Expulsion of Aliens." The anti-foreign plus anti-Regency agitation soon assumed a grave aspect, and Ii Naosuke, one of the foremost advocates of the ancient authority of the Shogun and of the policy of opening ports to the foreign trade, was assassinated in broad day on his way to the office. But a still harder blow that the Shogunate cause was yet to suffer was the refusal of the Emperor to open certain ports, while the foreign Governments were firmly insisting upon their being opened in conformity to the treaties already concluded. The Shogun found himself confronted by such an inextricable dilemma that further tenure of his office became manifestly impossible. In 1867, acting on the advice of the Lord of Tosa he resigned the office of Shogun and restored to the Emperor all the authority hitherto exercised by him through inheritance. Thus the feudal system, which had been consolidated in the beginning of the thirteenth century, and continued since and during the Tokugawa dynasty for a period of two hundred and fifty-six years, suddenly came to an end. Nine months after the resignation of Tokugawa Keiki, the last of the family as well as of the Shogunate, the coronation of the present Emperor took place. The development of political affairs in Japan since that time, I may take some other occasion to fully expound.

A FRIENDLY INCIDENT RECALLED

Without any sentiment of deprecation toward the precious memory of the great Commodore, it may be added that the peculiar gratitude which we entertain for the Americans should not be understood as exclusively due to the single fact of his visit. The fair dealing of the United States in all international transactions, and especially the righteous attitude which its people and Government have traditionally maintained toward weaker or distressed nations, has in no small measure contributed to the ever-increasing confidence and admiration of the Japanese. From the inauguration of the Monroe doctrine, followed by an unswerving observance thereof, which originated in a beneficent spirit to afford requisite protection to the smaller sister republics on the Western hemisphere, down to the propitious policy recently proclaimed for the maintenance of the integrity of the Chinese Empire, together with constant minor actions of common courtesy to many oppressed peoples—these facts have never been lost to the Japanese mind. Of all expressions of good-will which Japan has thus far had opportunity of receiving at the hands of the United States, I will mention one of the most chivalrous acts, to which no parallel can be found in all the world's history. I mean the Shimonoseki affair. The fact is briefly this: In 1864, when the agitation against foreign intercourse was at its pitch, the retainers of the Lord of Choshu, a feudal ruler, fired on certain vessels belonging to the Netherlands, France and the United States, which were passing through the inland sea. To retaliate, these three powers immediately dispatched their warships, joined by one of

Great Britain, to Shimonoseki, where the flagrant violation of the law of nations had been committed. After having destroyed the town, these Powers demanded of Japan a sum of $3,000,000 as indemnity, which was divided among the four Governments in equal shares. The United States, however, subsequently finding that the actual expense and estimated damages on their part were only $151,348, authorized the President by Act of Congress, February 22, 1883, to return the sum of $785,000 to Japan, the fund with accumulated interest at that time having amounted to $1,837,823.78.

The erection of the Perry monument is but one form of the manifestation of the grateful sentiment on the part of the Japanese people, and they will never cease to express the same sentiment as opportunity presents itself in the future.

Let me use the present opportunity to express my personal hope, in which I am sure most of my countrymen will share, that the erection of the Perry monument may prove one of the everlasting tokens of the cordial friendship and mutual good-will happily existing between the two most progressive nations in the modern world.

PROBLEMS OF THE BRITISH EMPIRE

ENGLISH LIFE AND WORK AND POLICY IN THE NEW ERA OF AMERICAN AND GERMAN INFLUENCE—WHY TRADE IS LOST AND EDUCATION IS ANTIQUATED—THE EMPIRE'S OUTLOOK—A PERIOD OF CONSOLIDATION—ENGLAND'S PLACE IN THE WORLD'S POLITICS

BY

SYDNEY BROOKS

[This is the concluding article of a series in which has been set forth the position, at the beginning of the century, of the several great nations of Europe—Germany, Italy, Austria, France, Russia and England.]

AFTER eighty years of unparalleled development, England enters the twentieth century in a spirit of dissatisfaction and national pessimism. Her supremacy in trade has gone; her politics and Parliament seem to be slipping down to the Continental level; she is harassed and humiliated by the stress of a protracted, costly, and grievously miscalculated war; and a profound distrust of the capacity of their public men permeates the masses. Wherever Englishmen look—to their educational system, their public services, their export returns, or to the national defenses—they find and feel themselves laboriously behindhand. They see rivals trenching on the enjoyment of all the old monopolies that, up to thirty years ago, were the exclusive possession of England. They see America reaching out, with an almost irritating consciousness of success, for the commercial predominance of the world. They see the exact intelligence and patient enterprise of the Germans invading all markets and ousting British goods. Along every highway and on every sea competitors, pushing, scientific, and thrifty, have arisen to challenge her old-time control, and England, as she faces the situation, has to confess herself unable to grapple with it. The cankers of a long peace and a seemingly endless surfeit of prosperity have brought carelessness and overconfidence and a blind faith in her own star. In war as in commerce, in education as in diplomacy, the old methods and the old machinery have been kept in use too long, fostering an intense and tenacious conservatism and voting down reform as at once unnecessary and impertinent. They did well enough in their day, the day of happy, undisputed monopoly, but under the stern test of competition one after another is seen to be breaking down. It is this that England is painfully realizing. She needs, and knows it at last, a radical reform—not the kind of reform which claimed too much of her time and thoughts during the nineteenth century, not tinkering with the Constitution or enlarging the suffrage,

but a reform of mental attitude, a remoulding and readaptation of the national spirit.

THE TEMPTATIONS OF A HALF-CENTURY

It is easy enough to blame England for the falling-off the last half-century has witnessed, but one has to remember the unique temptations that beset her. Take, for instance, the two decades between 1850 and 1870. While Europe was struggling through a chaos of revolutions and the United States was riven with civil war, England had no more serious domestic trouble to contend with than a Chartist agitation, a street riot, a mere affair of police. From the passing of the great Reform Bill in the early thirties up till today nothing has disturbed the harmonious sequence of her history. The Home-Rule movement seemed at one time likely to deserve the name of a crisis, but it passed, as Free Silver has passed, leaving behind it nothing more momentous than the temporary break-up of the party that supported it. Otherwise the Victorian era is a dignified, orderly narrative of broadening liberties at home and immense expansion abroad. This, then, was the first of the chances that fought on England's side. She had peace, while the rest of the world was at war. She had the leisure and the opportunity, denied to all her competitors, to engage in commerce. In the race for trade and empire circumstances gave her a seventy years' start. The field was clear of rivals. The earth-hunger had not begun, and commerce was sneered at as beneath the dignity of warlike races. Enormous as were her initial advantages, England turned them to excellent account. She saw her chance to become the workshop of the world, and brilliantly seized it. Agriculture was sacrificed at a stroke that industries might thrive, and, trusting to her exhaustless supply of coal, her fleet of merchantmen, and the skill of her laborers, England aimed directly at a manufacturing monopoly of the earth.

RAPID SUCCESSES

And, roughly speaking, she succeeded. The country grew in prosperity at a speed like that of the United States during the past half-decade. Living on American foodstuffs, England sold her machinery and manufactured goods to the entire world, and her accumulated capital flowed out across the seven seas to lay the whole earth under tribute. London grew to be not merely the greatest financial exchange, but virtually the only one. It was a period such as even America is never likely to see. Englishmen themselves look back on it now and half wonder whether it was real. "Our difficulty then," said an English manufacturer, "was, not to get orders, but to know which to refuse." And no one, of course, imagined for a moment that it would not last for ever. No one saw the menace to British trade that underlay Bismarck's policy of masterful aggrandizement. No one, least of all, expected to live to behold the New World underselling the Old in manufactures, as she had just begun to do in agricultural products.

MONOPOLY AND ITS RESULTS

One must admit the temptation was unique. There are other things besides liberty that can be purchased and retained only at the price of ceaseless vigilance, and among them is such a monopoly of trade as England enjoyed in the sixties. But the ownership of a monopoly is not conducive to vigilance, least of all among Englishmen, whose natural instinct it is to let the morrow take care of itself. With one accord they declared that things were good enough as they were, that changes, improvements, were costly and unnecessary, and that their commercial position was too strongly entrenched to be in danger of attack. Their wealth, their power, their prosperity caged them up in a fool's paradise of security and indifference, and hence have flowed many of the characteristics that today handicap the English in the new age of competition. That fatal complacency of theirs, their lordly, unaccommodating ways of doing business, the national myopia that will never unreservedly admit that English methods are not the best, and the shortsightedness that will not risk a dollar today to earn five next week—all these traits are the product of that halcyon age of monopoly, when the rest of the world had either to buy from England or to go without.

IN THE UNIVERSITIES

Nor is it alone in commerce that this suspicion of novelty, as something dangerous and ensnaring, has done its work. The universities cling to the dead languages, and hardly make an effort to equip the youth of the country for the life of today. Englishmen cannot, seemingly, be induced to regard education

seriously. The new Birmingham University, started by Mr. Chamberlain, after the model of Cornell and similar institutions in America, has had the utmost difficulty in getting together the necessary funds for its buildings. Indeed, but for the munificence of Mr. Carnegie, the first earnest attempt to bring technical education in England up to date, might easily have fallen through—and this in spite of the backing of the most forceful statesman in the country. Could anything be more ominously significant of the English attitude towards scientific instruction? The days are dead when Englishmen honored themselves by endowing seats of learning. The great names of American industry are one and all connected with schools, colleges and universities that their wise liberality has founded. But in England it is the rarest possible thing for a millionaire to reckon education among the objects of his benevolence. To appeals from charitable and religious bodies his purse is always open, but the claims of education do not interest him. Even to Oxford and Cambridge, which are the pride of every Englishman, bequests and gifts come as rarely as angels' visits. Nor does the State step into the gap left vacant by individual indifference. Education in England is free and compulsory, but the best English Board School hardly reaches the standard of the worst of the American Public Schools, and falls far below the average maintained in Germany. The whole system is confused, and indeed almost chaotic, as any system must be which is a compromise between the Church of England theologians on the one hand and the "Undenominationalists" on the other. The great seminaries which have made England famous, such as Rugby, Eton, Charterhouse, Marlborough and so on, are, it is true, magnificent training-grounds for a governing race, and in Germany, France and America attempts have been made to reproduce them. But they are restricted to the sons of the well-to-do and they do far more to mould the characters than the minds of their pupils. Teaching is their weak point, as it is the weak point of all English education. Compared with their two great rivals, the English do not appear really to believe in education, or, if they do, they are over-ready to seize on the smallest obstacle as an excuse for not acting on their belief. One never quite gets rid of the idea that in England cricket is thought more of than knowledge.

THE DEMOCRACY AND THE KING

England, one must always remember, though politically a democracy, is anything but democratic in spirit. It is a democracy, presided over by a monarchy and ruled by an oligarchy. Each successive Cabinet shows how small is the ring of noblemen, large land-owners and retired merchants from which ministers may he drawn. To reach Cabinet rank in England a big private income is an essential. Without it no man can hope to force his way into the charmed circle. I do not recall an instance of wealth, as wealth —divorced, that is, from birth or ability— being used as a stepping stone to the ministry. But the politician who aims at the highest offices in England, however capable and however well-born, must, generally speaking, be able to show a well-lined purse before he can expect official recognition or the confidence of the people. The habit of mind which has set up this barrier against the needy political adventurer, has also, of course, very greatly restricted the field which a Prime Minister is permitted to survey in choosing his colleagues. To be a member of one of the historic governing families, with a large rent-roll, the backing of society, decent manners and appearance and the merest modicum of ability, is a sure passport to office. Without these advantages it takes almost superhuman capacities to bring a man to the front. Mr. Chamberlain, for instance, is by all odds the strongest man in the Cabinet, if not in England. He amassed in his early years a large fortune by working an American patent for the manufacture of screws. Yet it is no secret that the inner patrician ring resent his present position as an invasion on their hereditary right to fill all the important offices of State themselves, and would willingly, if they dared, get rid of this all-conquering "provincial tradesman." No such considerations hamper the American President in forming his Cabinet. He is confronted by no "governing class," born in the purple, and looking upon office as a birth-right. Subject to the necessities of politics, he is free to choose the best man wherever he can find him. Here, again, he has an immense advantage over an English Premier who is bound by a tradition

having all the force of law, to pick out his colleagues from among the members of the House of Lords and the House of Commons. His area of choice is thus doubly restricted —first by the inordinate claims of "the hereditary rulers," and secondly by the Parliamentary qualification.

"AN ARISTOCRACY OF OFFICE-HOLDERS"

A Cabinet so chosen must of necessity have an aristocratic flavor. It cannot help being tender of antiquated privileges, vested interests and the venerable practices of the pre-competitive age. It thinks more of good form than of solid work, prefers elegance to efficiency, and perpetuates the disastrous idea that Government is an affair of charming manners and the small arts of condescension. Inevitably, too, it is out of touch with the business world. It is now almost a hundred years since Napoleon dubbed his great rival "a nation of shopkeepers," yet the moral of the jibe has not yet been taken to heart by the British Government. In Germany we see the whole force of the State devoted to pushing German commerce. The Kaiser himself acts on occasion the part of Imperial drummer, and every department of national life is organized on the principles of science. In America trade and agriculture are frankly recognized as the basis of national prosperity, and the Administration works prodigiously with a single eye to their furtherance. But to the English mandarins commerce is a negligible quantity. The State as such does little or nothing for it. The diplomatic service, which other nations are converting into an agency of commercial travelers, is still in England a convenient refuge for younger sons and aristocratic *fainéants*. The army is still the plaything of the privileged, and the War Office, in the interests of vested incapacity, violates every business principle known to man. Except possibly in the Colonial Office and in the Fleet, administration in England is hide-bound, inefficient, and swayed more by social influences than the wish to get the right man in the right place. The career is not always open to talent. Americans know the phrase "an aristocracy of office-holders." In England they have the fact—and its consequences.

To be unscientific forty years ago mattered little. Today it matters everything, and England has mainly herself to thank if she finds herself falling behind in the race for trade. Her want of earnestness in educational matters and the unwillingness or inability of the State to concentrate on the development of commerce are the chief reasons for her falling-off. There are, however, others of an external nature and not under her control. One is the rise of a consolidated German Empire, making science its guiding star and arming itself for the battle of trade with the same laborious precision—the same microscopic exactness that thirty years ago humbled France at Sedan. Another is the development of the inexhaustible resources of America since the close of the Civil War. This is a new and ominous factor in international life that may yet vitally affect the relations between Europe and the United States.

ENGLAND AND AMERICA

But after all, the causes of England's relative decline lie mainly in herself. Before the American advance she must give way, because America is too big, too wealthy, too energetic to be successfully withstood. But there is no reason why England should not be as scientific as Germany, why she should not make a superb fight for the second place. She has allowed herself to be hampered by sheer negligence in the use of her opportunities. Trade unionism, too, has done much to thwart her by limiting production, curbing initiative, reducing the hours of labor and virtually removing from employers the control of their own works. But fundamentally it is in the character and mental attitude of the average Englishman that the causes of inferiority must be sought—in his intense conservatism and his easy-going view of business. What the Englishman is to the Italian in energy and speculative pluck, that the American is to the Englishman. The American will adopt a thing just because it is new; the Englishman will cling to one just because it is old. A country where business is everything has an enormous pull over a country where business is merely business—an unpalatable interruption of the main purpose of life.

A REALIZATION OF THE FUTURE

England has reached a crisis in her fate and is slowly realizing it. With American

steel rails, shoes, bridges and machinery flooding the English market, and followed up by a constant stream of German manufactures, the need for a thorough reform is being brought home in that practical fashion which Englishmen appreciate. The discovery has spread dismay and confusion, and the pessimism engendered is all the greater by contrast with the former confidence and prosperity. This is something that should not be forgotten. The feelings of one who after starting on equal terms finds himself overtaken in the race may be bitter enough; but their poignancy is as nothing compared with his emotions who, after having secured a commanding lead, watches his rivals diminishing it bit by bit. And that is England's position. It is not that she has fallen behind; it is that her supremacy is not what it was, that other competitors are creeping up and that she is tormented by the fear that they will outstrip her. Hence a chapter of lamentations of quite extravagant exuberance. To take them all literally—and they cover the whole field of national life—one would have to conclude that British commerce was in its death struggles, the British Empire tottering to its fall and England herself sinking into a third-rate power. But the truth of it is that, while there is much to be done in the way of reform, the commercial and political position of Great Britain is still of extraordinary strength. The total value of her external trade is over $1,500,000,000 a year more than any other nation; she is still the greatest exporter in the world; her navy is absolutely unrivaled and must long remain so; a more than handsome share of the world's carrying trade falls to her mercantile marine; the Empire she has founded is unparalleled in history for its vastness, loyalty and prosperity; and her army, after some bitter experiences, has just given signal proof of constancy and ability to learn its business.

PESSIMISM THE REACTION FROM BOUNDLESS OPTIMISM

Not much in all this, surely, to justify pessimism. Indeed, to one who knows how the European nations detest England, envy her stability and success and profess to think themselves endangered by her rapacity, there is something almost humorous in the sight of Englishmen plunging into a fit of nervous self-depreciation. So far as I can see, the facts do not warrant lamentation. Granted that the commercial sceptre must eventually pass to America, enough will still be left for England to make a living. The times call not for dejection, but for resolution. The great need of England is science, and the next decade or two will show how far she is sincere in wishing to equip herself for the life of the twentieth century. If she reorganizes her educational system after the German model, if she strenuously seeks to remove the national curse of drunkenness and to combat pauperism by the erection of sanitary dwelling houses and the adoption of American methods of transportation, if she acts in earnest on her latest and most useful discovery that business methods are not out of place even in Government offices, then there is no reason why the twentieth century should not be as bright a page in the national history as the nineteenth.

THE COLONIES WITH THE MOTHER COUNTRY

There is one quarter in which even the most despondent Englishmen see nothing but hopefulness and light. The magnificent rally of the colonies to the side of the mother-country during the stress of the Boer war has at last brought home to "the man in the street" some sense of what Empire means. For the first time the British Empire is a vibrating and unified whole. The days when England all but let her colonies slip through her hands through sheer apathy, when responsible statesmen talked in public about "educating the colonies in independence," are irretrievably gone. A new era has opened with union instead of separation for its watchword. The more one looks into the state of British policy during the last half century the more clearly one perceives that the unconscious drift of the nation is away from Europe and toward the Empire. The old Palmerstonian policy of meddling in European affairs, the old Palmerstonian ideal of being a decisive power in the Continental chancellories, has been outgrown. Year by year England moves farther from Europe to intrench herself more and more behind the Empire. There is probably not a single European question that could now drag her into war. By treaty she is committed to the independence of Belgium, yet it is perfectly

well understood that if and when that independence is threatened, England will do nothing to maintain it beyond the usual diplomatic protest. The future of Austria-Hungary will be settled without the intervention of England, and the dear delusion to which Englishmen used to be so partial—that the Turk could be regenerated—has now been officially given up. England will never fight again to keep Russia out of Constantinople.

ENGLAND IN THE NEW CENTURY

In what shape the new-born enthusiasm for the Empire is to develop will be the master question of British policy during the twentieth century. The Boer war cannot leave the Empire as it found it. It has opened up a practical path to that Imperial Federation which is ideal of English statesmen—a path which England is only too anxious to follow up. Three schemes have already been put forward for binding the colonies still closer to the mother country—one for a gigantic system of Imperial defense, with every colony contributing its share to the naval and military forces; another for a Pan-Britannic Senate composed of delegates from the self-governing colonies, sitting at Westminster and thence superintending the affairs of the Empire; and a third for a customs union, an Imperial Zollverein, coterminous with and restricted to the Empire, and directed against the rest of the world. Of these, the first only is immediately practicable. The Zollverein theory is already relegated to what Mr. Gladstone called the dim and distant future. England will not give up free-trade, and the colonies cannot as yet afford to sacrifice protection. Nevertheless, the idea of the various units of the Empire standing together commercially as well as politically, will continue to stir and to fascinate many minds, and on the day when it is shown that the colonies can provide the mother-country with the foodstuffs and raw material she needs at prices no higher than those of Kansas or Nebraska, some attempt to realize it may conceivably be made. When that day comes, the character of the British Empire will be fundamentally changed. At present it is a trust administered by Great Britain for the world's benefit. England derives from it no commercial benefits that are not open to all nations. English traders enter the colonial markets on the same terms, no better and no worse, as American traders and German traders. The so-called preferential tariff adopted by Canada in 1898 contained not a single clause that would prevent other countries besides Great Britain from sharing in its benefits. The Empire, in short, is one of commercial peace. But on the day it resolves itself into a Protectionist union, it becomes an Empire of commercial aggression. It drags England into the raging war of tariffs; it provokes retaliation; it alters the whole spirit in which Englishmen have built up their Empire and faced its responsibilities. There could, therefore, be no more momentous event in Great Britain's future than the formation of an Imperial Zollverein. Possibly, too, there could be no more disastrous event. But on that point conjecture is unnecessary, as the conditions which could alone make a commercial union of the Empire possible, have not yet arisen and are not likely to arise for at least another eighty years.

As for the notion of a Pan-Britannic Senate, that scheme, too, in spite of Sir Wilfrid Laurier's backing, has one fatal flaw. The colonies do not want it. They are devoted to the Crown and the Empire, but they are excessively suspicious of Downing street and Westminster. And the basis of their devotion is sentiment and freedom. They are loyal mainly because they are English and because England does not interfere with them. Let them do as they please and their enthusiasm will not falter. But to manufacture formal bonds, like that of an Imperial Council, is simply in colonial eyes to multiply occasions for misunderstanding. Alone among the nations of the world, the English have learned that the chain which would bind an Empire together must have the charm of invisibility. It must be a chain of sentiment, of common instincts and racial patriotism, not of parchment and machinery.

A PERIOD OF DEFENSE AHEAD

In the matter of Imperial defense something had been done before the Boer war broke out. Australia some years ago fitted out a small squadron of light-draught cruisers, mainly at her own expense, but with the stipulation that they should only be used in Australian waters. In 1898 Cape Colony set aside $100,000 a year as a contribution to

the Imperial navy, unattended by any conditions. Canadian and Australian troops were also employed on the ill-fated expedition that set out to rescue Gordon. But these were mere incidents compared with the eagerness of all the colonies to pour out their blood and treasure in defense of the Empire when the Boer successes seemed for the moment to endanger England's hold on South Africa. This war has armed the Empire. It has sent a thrill of solidarity from London to Quebec and Quebec to Peshawur, and it has set on foot a movement which amplifies and gives scope to the sentiment on which the Empire rests. It cannot be long before all the self-governing colonies have their own armies and their own fleets, and the world will shortly have to accept it as an axiom of politics that to attack England is to attack Canada, Australia, New Zealand and India also. This coöperation in mutual defense is in line, too, with the central tendency of British Imperial policy. So far as one can see—and it is now not a question of politics but of geography——the period of acquisition is over. England wants no more territory, and even if she did there is no more to be had, except an odd slice in Africa and a strip or two in Central Asia. The nineteenth century closed the era of expansion; the twentieth inaugurates that of consolidation. To hold and develop what she has won is the task of Great Britain from now onwards.

POSSIBILITIES OF WAR

I have said that England is not again likely to be drawn into a European war, and that in the event of any struggle between the Continental Powers her neutrality is guaranteed. She is not on that account exempt from all danger of war. Her Empire is too extended and cuts across the path of too many rival ambitions to permit of any such illusion. Except among some of the small nations who owe their freedom to her sympathy and assistance, England can count upon no friend in Europe. The Continental Powers dislike her with a savage intensity that excels even their hatred of America. It is not only that England has forestalled them in the modern craze for trade and empire, nor is it only that she relies on a voluntary army while they are groaning under conscription, and thus presents a picture of mingled wealth, stability and contentment they would do anything to be able to claim as their own. These causes have naturally much to do with the almost world-wide aversion that centres on Great Britain, but at the bottom of them all is an instinctive and ineradicable dislike and distrust of the national character—its haughtiness, its narrow insularity, its unctuous rectitude, its preaching sentimentalism. Europeans attribute to British diplomacy the diabolical craft and farsightedness and rapacity that Englishmen and Americans affect to discover in Russian policy. England's offense is the greater in that she is held to veil her designs under the mask of an assertive humanitarianism. That her sympathy for the Armenians, for instance, was simply a hypocritical pretext put forward to cover the workings of some long-matured political *coup* was something that no European even thought of questioning, any more than it is doubted that, beneath all the cant of equal rights, the Boer war was engineered solely to capture the Transvaal gold mines.

ENGLAND A "BAD EUROPEAN"

And to the many other causes of England's unpopularity it must be added that she is reputed a "bad European." She holds aloof from the Continent, and sometimes, as during the Spanish-American war, flatly opposes it. A good many Americans have an idea that England's "splendid isolation" is forced upon her. The Continent knows better and hates her the more for it. It is at the root of the anti-British feeling that she goes her own way and avoids alliances. Except the United States, there is no Power on earth that would not willingly pay almost any price England cared to ask for an offensive and defensive alliance with the British navy. Thrown into the scale of the Dual or Triple alliance, England's weight would dip the balance irresistibly; and the consciousness that this is so at once exasperates Europe and at the same time prevents her exasperation from running to extremes. England's isolation is altogether of her own choosing, as purely voluntary, as much a matter under her own control as is America's refusal of "entangling alliances." The policies of the two Anglo-Saxon countries are the source of considerable concern constantly to the nations that seek always new alliances.

THE PROBABLE POLICY OF THE BRITISH EMPIRE IN THE EAST

In former articles in this series I have incidentally noticed the possibility of all this accumulated Anglophobia being set in a blaze, and have given it as my opinion that the danger of a chance spark is chiefly to be feared from the colonial policy of France and the clashing of British and Russian interests in Central Asia or on the Persian Gulf. To that I have nothing to add, except to note that the undercurrents of English political thought are setting more and more steadily toward a comprehensive Anglo-Russian agreement. This is indeed the first of all problems in the foreign policy of Great Britain and, thanks to the seemingly incurable suspicion that each nation entertains of the other, by far the most difficult. It is inevitable that some day or other the frontiers of the two powers in Central Asia must touch. If they are not to collide a frank understanding is essential; and the British Minister who first breaks through the national disdain for whatever is remote and intangible, and settles down to bargain betimes in a broad spirit with the Russian Foreign Office, will deserve the thanks of all lovers of peace. Access to the Persian Gulf is vital to Russia, and to attempt to debar her from it is merely to repeat the folly of the Black Sea clauses. An assurance from England that she would be welcomed there, that there would be no opposition to her debouching near Bushire, no repetition of the Crimean blunder, would at once make possible such a delimitation of frontiers in Central Asia as would forever remove from the British mind the nightmare of an invasion of India. It would be a compact advantageous to both sides and therefore resting on solid foundations. Some such arrangement is being steadily advocated in England by those who foresee the perils of the present hap-hazard system, who prefer Russia to Germany as a friend and would like to see the British Foreign Office, for once in its life, exercising that "intelligent anticipation of events before they occur" which the present Viceroy of India once rashly declared to be the province of the journalist, rather than of the statesman. Whatever it is the Foreign Office might have used it many times with good effect.

A PERIOD OF RECONSTRUCTION AT HAND

In her internal as in her Imperial politics, the opening of the twentieth century marks a definite phase of England's development. The last seventy years have been taken up with the work of political transformation—the abolition of privileges in church and army, the secularization of education, the widening of the suffrage, the gradual resettlement of the State on a new democratic basis. In this direction all that can be done has been done, and after a prolonged burst of destructive energy, of tearing down and remoulding, the nation is entering on a period of constructive reform. Nobody wishes to see the suffrage extended any further; very few wish to tamper any more with the old and tried machinery of the constitution. Those few whose mania for political vandalism is not yet exhausted fix their eyes on the House of Lords and the Established Church as fitting prey. Both institutions for the present are quite beyond reach of successful attack, and the questions of the immediate future are rather those of higher and secondary education, the improvement of artisan dwellings, old age pensions, and the proportionate reduction of Irish representation. The first three of these are problems that virtually affect England's efficiency as the home of an imperial race and a competitor in the world's commerce. It is possible, too, that before long British agriculture will be reorganized on the coöperative system that in Ireland, Italy and Prussia has revolutionized farming. England's internal politics, at least where they do not touch on Irish questions, are likely to be dull for some years yet. The old party lines have become obliterated and new issues have not arisen to divide the nation once more into two opposing groups. But it seems clear that the main tendency of legislation will be towards equipping the people for the competitive struggle that lies before them.

THE CRISIS IN THE NEXT DECADE

There is a clearer realization than ever before of the weak points in the national armor and that now or never is the time to remedy them. No nation has a more humdrum, unspectacular, or more vital task before her during the next decade than England.

THE AMERICAN LOCOMOTIVE ABROAD

IN USE ALL OVER THE WORLD — THE ADVENTURES THEY MEET — SETTING UP ENGINES IN RUSSIA AT THIRTY DEGREES BELOW ZERO — THE COMPARATIVE MERITS OF ENGLISH AND AMERICAN LOCOMOTIVES

BY

M. G. CUNNIFF

THERE is practically no country in the world that does not know the American locomotive. Not long ago in a chill South African dawn an American war correspondent was called from his bed to see one go by; his host thought the sight would fill him with national pride. It did. In Europe, Siberia, New Zealand, South America, he could have received a similar thrill. Even on the swept and dusted "permanent way" of the English trunk lines—the Great Central, the Great Northern and the ultra-conservative Midland—locomotives from New York and Pennsylvania are now hauling daily "goods trains" loaded in some measure at least with American freight. Step by step American builders have kept pace with railroad development the world over until now ten engines are shipped abroad every week.

Though steel rails are sent abroad, steel freight cars by the dozen, electric cars and countless motive and traction devices, not to speak of railroading raw material, the romantic story is the story of the locomotive, largely because it has gained preëminence against most daunting obstacles. In the face of these, American engines have clearly won their way; the growth of the trade shows it. They have given satisfaction; repeated orders prove it. In 1896 the export figures were 309; last year, 525. And as buyers in the countries that have tried American locomotives—Japan and Sweden for example—continue to order more, a further increase is bound to come; the trade thus far this year gives a token of it.

The export business began significantly in 1840, when railroading was but ten years old. In that brief decade Americans had so outstripped the inventors of the locomotive in enterprise that when the Birmingham and Gloucester, an English road, built the famous Licky incline, to still the clamor that the new-fangled competitors of the mail coach could not climb a hill, the company sent to America for engines to perform the feat. Four locomotives accordingly were ordered from William Norris, who, like Mr. Baldwin, had improved on the John Bull, a Stephenson locomotive imported to New Jersey and still in existence. The American engines hauled loaded trains up the incline with ease, solving for England the greatest problem then confronting steam traction. This was the first triumph of the American locomotive away from home. It has since then won others. And in the solitary case where it has been definitely asserted that the American engine has fallen short of the English, the complaint is explained by prejudice and by the fact that modern American railroading methods, like those of Norris and the other pioneers, are so progressive that English railroad men do not understand them. Oddly, the Birmingham and Gloucester, on which American engines first made their reputation, is now part of the Midland, the road whose officers have recently tried to ruin that reputation, while the Norris workshops have been absorbed in the Baldwin Locomotive Works. But if the lesson the English are learning in steadily decreasing railroad dividends has its natural effect, the conquest of the prejudice will not be long delayed, and our methods may gain appreciation.

Ever since the Norris export to England American engines have gone chiefly not so much to the Old World as to newly developed countries. In these countries, moreover, the trade campaign, now a contest with English builders, must be fought; for locomotive-building countries will continue to use the home-built product until they are convinced that the American type is better, and

then instead of importing they will imitate. Recent German importations, for example, have been for purposes of study, and already German railroads are beginning to follow American methods. Some observers have concluded that the English purchases of locomotives in America four years ago, due in reality to the great engineering strike that tied up English industry, heralded the driving out of English, French, German and Belgian machines by American; but American locomotive builders expect no such development. Though from time to time, without question, American locomotives will go to Europe—for some are ordered every year—the bulk of the exports will go to new countries, where there is no prejudice and where bad fuel, steep grades, sharp curves, heavy loads, hard work and unintelligent handling are the rule. When it comes to meeting such conditions, and at the same time proving a paying investment, American engines cannot be equaled. What they can do under good conditions all the world knows.

The multiplicity of the places where the engines go will appear from a glance at the export sheet of the Baldwin Locomotive Works, the greatest locomotive-building plant in the world. In 1899 and 1900 the Baldwin Works exported 701 locomotives to the following places:

NORTH AND SOUTH AMERICA

Canada	Nova Scotia	Newfoundland	British Columbia
Alaska	Mexico	Costa Rica	Cuba
Porto Rico	Hawaii	Yucatan	San Domingo
Ecuador	Colombia	Peru	Brazil
Chile			

EUROPE

England	Ireland	France	Spain
Belgium	Holland	Bavaria	Denmark
Norway	Sweden	Finland	Russia

ASIA AND AUSTRALIA

Manchuria	Siberia	India	China
Japan	Burma	Assam	Victoria

AFRICA

Algeria	Tunis	Soudan	Egypt
Uganda	Cape Colony		

As other firms, most of them now in the American Locomotive Company, exported in the same time 301 locomotives—to these countries and others—there is now no spot on the globe newly developed by railroads where the whistle of an American locomotive cannot be heard. The outgoing of these engines, too, has meant an influx of wealth. In value the 525 locomotives exported by all firms last year as given by the Government Bureau of Statistics reached a round five million and a half; the 514 exported in 1899 brought over five million; and in 1898, the best year so far, the return reached five million and three-quarters. The *Railroad Gazette* for August 16th reports that seventy per cent. more locomotives were ordered in the United States in the first seven months of this year than in the same period in 1900—a goodly proportion were for export.

To some of the places abroad this trade has drifted naturally. Cuban railroads, for example, have been American since the beginning. Mexican and Canadian roads use American engines as a matter of course. But in some countries, as in Russia, American civil engineers and contractors have led the way. Elsewhere orders have been secured through agents, through bidding for submitted contracts, often in competition with English, French, and Belgian bidders, and many times through simply waiting for old customers to renew their orders. Yet in few instances has the trade been secured without strenuous effort against obstacles.

There was Chile, for instance. Since railroading began in South America in the sixties, Argentina, Brazil, and Chile have imported railroad supplies from the United States. In Chile, however, when W. W. Evans introduced American engines on the newly built Great Southern, so outspoken were the fears that his American engines could not equal the English engines, that he proposed a test. The test took place on the steep slope of the Tabon at Llai Llai. Though the American engine was to lead, Evans, who suspected that a trick might be played on his machine, made the English engine show the way, with the result that a stretch of oiled track prepared for the American engine by some unscrupulous subordinates unexpectedly caught its competitor to the great chagrin of the plotters.

That is one obstacle—trickery. So small a thing as a pinch of emery dust dropped in an oil cup may result in fast-flying rumors that in Assam, or New Zealand, or England, an American locomotive has failed. The possibility of treachery is so great that the American workmen sent out to set up engines sleep and eat with the locomotives until after

proper trials they have been delivered. Even then there is no assurance that an excellent machine will not pound itself into the workshop within a week through no fault of its own. International competition is not distinguished for amenities. A shell plumped into the agency office, and the curt placing elsewhere of a large order followed the intriguing of an employee of a locomotive agency in a South American civil war. In Jamaica came another competitive test. One of the best engineers in the United States after years of experience in Jamaica with both kinds of locomotives, avers that the excellence of the American product is unquestioned as far as Jamaica is concerned. A very recent dispatch corroborates his word: "An American locomotive hauled 120 tons over the heaviest grades in seven minutes under scheduled time; the English failed to draw the load, and with a lightened load ran slower than the schedule." This was another example of forcing recognition. On a larger scale are the difficulties met in Europe.

It is widely known that since Nicolas I. on a map of Russia ruled a straight line from Saint Petersburg to Moscow, and ordered the Nicolaiev Railroad built along that line, American locomotives have run over all the Russian and Siberian railroads—on Pennsylvania rails, too, laid on Oregon ties: it is less well known that there are not so many of these locomotives as there might have been. Some dozen years ago the agent of an American firm made a bid in Saint Petersburg on over fifty locomotives. This was the brief history of his bid: "By the directors, officers and engineers of the railroad—recommended; by the Ministry of Ways and Communications —endorsed; by the Financial Committee of the Cabinet—rejected, with this comment: "American locomotives cheaper and better—but order in Austria." Russia wished to secure an Austrian alliance in a quarrel with Germany. The next order went to Germany: the quarrel had been patched up. Later the programme was repeated, but as Russia was trying now to induce France to be joint guarantor of a Chinese loan, the final blue pencil comment of the committee read: "Order in France." The price was not considered.

As for physical hindrances, though they, it is true, have been no greater for American exporters than for foreign, yet even here Americans have distinguished themselves.

An unverified story—true, perhaps, only in general outline—tells of an English locomotive builder who had received notice from a New Zealand railway that the English designs submitted were unsuited to New Zealand tracks and bridges; he is reported to have replied: "Then rebuild your tracks and bridges—we will furnish you with this sort of locomotive or none." An American builder would have replied: "Expect new designs by the first of the month." At all events, New Zealand is buying American locomotives. Furthermore, in an effort to apply American brains to local conditions in far-off places, the Baldwin Locomotive Works has sent for samples of local coal: the locomotives have been forthwith built with fireboxes and boilers adapted to that coal. Contrary to American custom, copper fireboxes have been put into engines for export to meet foreign demands. English trucks have been put on American tenders for English roads. In brief, what American experience has proved advantageous has been modified to suit the ideas of purchasers. In prompt delivery secured by the employment of American experts in all the handling of the locomotives, American methods have been equally business-like. Thus when an engine is built, it is jacked up, fired, given a brief trial, boxed at once for shipment, and then put in charge of an expert engineer. That engineer's business is to see that the locomotive is at work in the quickest time possible, whether the railroad begins at a dock in England or nowhere on a Russian steppe. At Riga in Russia, as an example of the thing, a little group of American workmen with no tools but screw-jacks, levers and ropes put up twenty American locomotives in thirty-seven days. And at Jaffa when the road was building that was destined to carry American locomotives into Jerusalem —a French road, by the way, which has shown its satisfaction with American engines by repeated orders since 1890—it was necessary to send the parts in on lighters from a vessel off-shore, and set up the engines there on the beach. Here, also, to mention a curious fact, the more ignorant natives went bankrupt betting with the sophisticated that the unfamiliar monsters would not move.

Accordingly, when the first locomotive steamed out of Jaffa, the sound of its exhaust was overpowered by the wails of bankrupt Syrian gamblers. The serious feature of the affair was the task of taking boxed parts from a ship directly to their place on an unfinished engine on shore.

Such results can be attained only by employing expert American engineers. Indeed, with foreign orders sometimes as many as fifty men are sent out. "The cost for labor, freight and insurance per engine sent abroad," said a man who knows, "is about $1,200; it is heavy—but it pays. We send the right kind of men: in their hands our reputation is safe." The work they sometimes do, moreover, is astounding.

Modest William McCarroll, type of the American engineer who does things, went to Sergieff, Russia, to set a consignment of Baldwin locomotives. He found them in parts, filling countless boxes dumped in the snow. A little railroad ran half way to the main line on which the engines were to run. The interval was a hummocky waste. The thermometer was twenty degrees below zero. He was alone; this time there were no assistants. How to transform those snow-covered boxes into complete Baldwin locomotives twenty miles away was a problem that would have baffled Hugo's Gilliat or Mr. Kipling's Wardrop. What did McCarroll do? One by one from the sparse hamlets of the region he picked up a hundred and twenty-five Russian peasants; hoisted his boxes with ropes and primitive pries upon flat-cars; ran the cars to the rail head; and scrutinized the steppe before him: ridges, gullies, holes, hills—with massive locomotive boilers to be transported across them. From the scant materials at hand he made a great sled, piled snow upon it and rolled a boiler into the snow. Half of the hundred peasants hauled on a long rope; the other fifty went ahead constructing trestles over the gullies and cuts through the iron soil of the hillocks. With a heave all together, the boiler was carried 'cross country. Day after day in the biting cold the human pack animals dragged those locomotive parts until all had reached the workshop—a frigid Russian hillside. At Philadelphia ten such engines could be set up in a day; there in Russia it took ten weeks to put up one—with what problems to meet and what difficulties to overcome a layman cannot imagine.

Nor was there a holiday when the completed engines stood ready on the track. Water, which froze on the way, had to be carried half a mile and then melted. Mild fires had to be maintained to keep it melted. And when at last a wood fire was roaring in the fire box of the first locomotive, and the engine was proudly puffing up the new track, the rails spread two miles from camp and the engine went pilot foremost down the bank. With a wrecking car and a steam derrick it is no joke to put a derailed engine again on the track. Consider the plight of a single engineer, with a locomotive on its nose in a snow-bank, a few wooden levers, a rope and a gang of ignorant Slavs. But "off again" with McCarroll was "on again," if it took all the White Czar's subjects to help him; for by dint of the snow shoveling and the tugging of two hundred peasants the engine returned to the rails. Mr. McCarroll says the whole feat "took a little scheming." It may have been a little scheming or it may have been brilliant engineering.

A more significant feature of the business, however—one that has sharply called attention to locomotive experts—deserves attention. It takes the form of a statement from Mr. Samuel W. Johnson, locomotive superintendent of the Midland Railway, of England, published in a London daily paper in May, as follows:

"In January of last year we commenced a six months' comparative test, terminating at the end of June, between these Americans and our standard Midland goods engines, built by Messrs. Neilson, Reid & Co., of Glasgow, and Messrs. Kitson & Co., of Leeds. The two types were set to draw similar mineral trains under the same conditions, and a careful account was kept of the total mileage covered by each, the total coal consumed and the charges for repairs which belonged to each engine. The result was conclusive, and is briefly as follows:

"Extra working cost of American engine over English engine:

Fuel	20-25	per cent.
Oil	50	per cent.
Repairs	60	per cent.

"It must be said for the foreign engines that they worked their trains satisfactorily, but their inferiority on the three points named is, on the

AN AMERICAN LOCOMOTIVE NEAR RIO JANEIRO

above showing, uncontestable. I cannot name any other points in which they showed superiority."

Certainly such a statement is incompetent to prove a single fact. To begin with, it fails to specify the engines tested, an important omission—for though the Baldwin engines, albeit modified somewhat by the demands of the Midland, were essentially American in type, the Schenectady engines, were, in reality, largely of English design as one may see by a glance at the accompanying illustration. Such a report is not frank. And in the second place, the statement does not mention the amount of coal burned per engine or the loads drawn while the coal was being burned; it does not say how much oil was used or how many repairs were required, or what sort of repairs they were. "An American engine is built," says an American newspaper, "not to save coal unprofitably, but to burn it profitably." It consumes more coal, it may be granted, than a similar English locomotive; but it does more work. A builder received a complaint from an American road that one of his engines was burning too much coal. "How many cars on the train?" he wrote. "Four," was the answer. "Try twelve," he wrote back. Forthwith the engine drew the twelve cars with an economy of fuel. In America we do not set a Clydesdale or a Percheron to draw a dog-cart, or a Mogul locomotive to transport two-car freight trains. In brief, transportation economy is so well worked out here, that before we can give credence to the report above, that our type of

A SCHENECTADY ENGINE IN ENGLAND

AN AMERICAN CONSOLIDATION ENGINE IN JAPAN

AN ENGLISH MOGUL BUILT AT SCHENECTADY

engine is not economical, it will be necessary to know whether those American locomotives burning twenty-five per cent. more coal than their English rivals were or were not able to do more work. As for oil, it is possible that the patent American oil-cups, which work only when the engine is moving and which have superseded the wick-of-waste siphon method of oiling which the English still cling to, may use a large amount of oil; it may be true that American engines have more bearing surfaces than English engines; but before anything definite can be known on those subjects, it will be necessary to have a test that shall furnish data concerning specific amounts used and the intelligence of the engine-drivers. We come to the repairs. In less than three years, according to Mr. Johnson's statement, the American engines cost sixty per cent. more in repairs. But we do not know what the repairs were, or how much they cost, or what made them necessary.

In the first three years, says an American locomotive builder, the repairs on locomotives properly handled are inconsiderable, except in the matter of adjustments to local conditions. It would be pertinent to know then, in the first place, whether the sixty per cent. difference means that the English locomotives cost in repairs one dollar and the American one dollar and sixty cents, or some such infinitesimal sum; and secondly, whether the breakages were due to defective workmanship, incompetent engine-drivers or adjustments that would not be necessary here. It would take a large bill of repairs, moreover, covering a long period in the life of an engine, to offset the usual difference in cost between the two types of machine. But enough has been said. The statement is valueless.

THE FIRST EXPORTED ENGINE CLIMBING THE LICKY INCLINE

An old print showing the first triumph of the American locomotive in England

IN PROCESS OF ERECTION FOR THE MIDLAND

Furthermore it is understood that the Baldwin Locomotive Company tried for some time in vain to secure information from the Midland Railway regarding the working of their engines; nothing was given. Mr. Johnson's statement, too, was not made public until nearly a year after the closing of the tests; meanwhile no word was sent to the builders. And finally, Mr. Johnson has been asked by an American correspondent to substantiate his report since giving it out, and has failed to do so. As the Midland Railway stands alone in publicly decrying American locomotives after using them—even in England, the Great Northern and the Great Central, with engines bought simultaneously with the Midland purchases, have made no complaint—and as a private report from the Midland itself shows that the engines were in reality satisfactory, for it was commonly reported on the Midland that the ten per cent. increase in "mineral train" loads necessitated by the recent coal famine in England showed the American locomotives hauling the longer trains with an economy of fuel, it is hard to see how such a statement as the one issued was ever made. Mr. Johnson is a man of unquestioned standing, and it is absurd to think he deliberately published a misleading report; but it is patent to any reader of the report that it insinuates a charge that it utterly fails to substantiate.

Indeed, from the first glimpse of the seemingly roughly finished American engines in

ANOTHER VIEW OF THE SAME LOCOMOTIVE

ERECTING A BALDWIN LOCOMOTIVE IN RUSSIA
Twenty-seven degrees below zero. Engineer McCarroll the second man from the left

England and in English colonies there has been a very definite prejudice against them. Instead of trying to do their best, the drivers have found fault. Though many, it is true, did adapt themselves to the novel machines, others went to ludicrous extremes to discover flaws. One in India said the jouncing made him ill. A demand was made in England that the American cabs, which give the engineer and fireman comfortable seats and protect them from sun and rain, be replaced by the English open cabs, which merely give them a foothold. Mr. J. C. Turk, the engineer who built the Gokteik viaduct, says that the firemen in Burma complained that it was harder work to shovel coal into the American fireboxes than into the English—possibly true, but certainly puerile. Add to all this the fact that English and colonial railroading methods differ from American methods, and it is possible to surmise the basis of the Midland report: thoroughly crystallized conservatism, a strange lack of progressiveness.

"Given a desire to make the engine succeed," said a well-known locomotive man, "and an English engine-driver can do as much with an American locomotive as with an English, after he gets used to it; given a desire to make it fail, he can easily do far less." Unfortunately, in one aspect, English makers cannot afford to export engines here, so that our engineers could show how fairly a foreign product can be treated; the only English locomotive in the country, now owned by the Pennsylvania Railroad, has been given

THE FIRST LOCOMOTIVE ON THE JAFFA AND JERUSALEM RAILROAD
Showing the temporary pier on which the parts were received from the ship

a long and patient trial for many years. W. E. Musgrave, an old locomotive engineer, now chief engineer of the New England Gas and Coke Company, quotes an engineer who ran this English machine as saying: "It's a good enough engine, when it has nothing to do, but when it has a load behind its drawbar, it sits down and looks at you with tears in its eyes."

Putting aside the Midland report as worthless, then, but in all fairness granting that it may have the basis that American locomotives at present do not fit smoothly into English locomotive practice, the whole controversy, in so far as there is a controversy, resolves itself into a difference in methods. The dividends earned by our vast network of lines, when compared with the dividends earned abroad, bear out our confidence in our kind of railroading. If any changes are to come, therefore, they must come in foreign principles of economics, not in our locomotive building. An American builder builds an engine to wear it out. Scrupulous attention is paid to all working parts, as any one can see who visits a great locomotive plant. The mechanism of each machine is made easily accessible. Parts are interchangeable, so that repairs can be made with speed. No unnecessary paint is wasted. As soon as the machine is finished, it is put in commission and driven day and night with the heaviest loads it can stagger under. It goes into the repair shop only when it requires overhauling. Men are hired to run it at good wages, men of ability and intelligence, with a typically American personal interest in their charge. Under such methods the engine is banged through a quarter century of strenuous activity, and then antiquated, worn out, superseded by advanced types, it goes to the scrap heap. The result is profit.

THE TEMPORARY TRACK AT JAFFA
In the background is a Baldwin locomotive arriving from the Beach

In England—and in France, for that matter—an engine is built to last. Non-working parts, cabs, tenders, frames, are as beautifully finished as bearings—painted, striped in gold, polished, kept as neat and shining as much poorly paid labor can make them. On the Midland every locomotive spends one month out of every twelve in a vast paint-shop ac-

A TEST ON THE VICTORIAN RAILWAY IN AUSTRALIA
The American engine draws 781 tons in 54 cars

commodating 200 engines One-twelfth of the time, in other words, the capital invested in every engine is idle, and other capital is spent on the machine in paint and wages, sheer waste. The working parts of English engines are hard to get at for repairs. Often, when anything breaks, new parts have to be made. The drivers as a class are inferior to American drivers, and their wages are very much lower. Periodical inspections are made, using up more working time. The engine draws light loads over short, carefully kept lines, similar to our best suburban roads. Twenty years after it has been superseded by newer and better types, a locomotive is as tenderly cared for as ever: in slow Government fashion employees paint and putter over it as if it were a brand new creation of yesterday. The result is decreasing dividends.

Photographed by J. C. Turk
TWO BALDWIN LOCOMOTIVES ON THE GOKTEIK VIADUCT IN BURMA

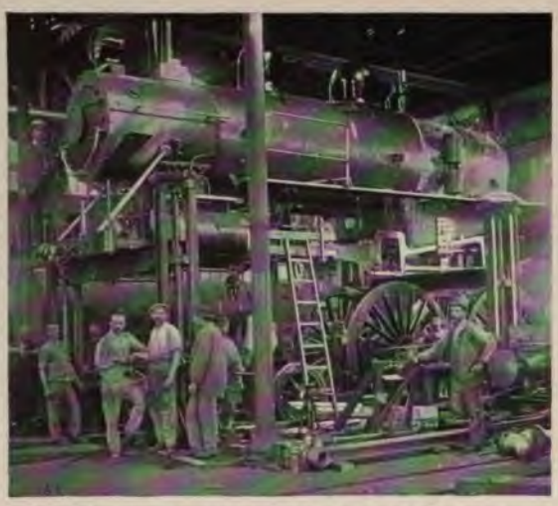
The men in the cab, too, count for much. A prominent American consulting engineer, who once saw an engine-driver in France overwhelmed by a trifling accident, tells the tale of a locomotive engineer in Michigan, who, after a wreck that had knocked one cylinder off his engine and smashed in the head of the other, cut out of wood a plug for the broken end, and came home in a cloud of steam with but one side of his engine work-

ing, and barely working. "That," said he, "was typical." Another told of an engineer on the Vermont Central, who, against the orders of his superintendent, on his own initiative, changed the rigging of his smoke-box and brought a train in on time that for months had been consistently late because the locomotive could not make steam. The latest and most interesting statement of the whole matter pointedly sums it up. It comes from Samuel S. Lyon, American Consul at Hiogo, in Japan, who in his consular report of July 31st submits a clipping from the Kobe *Herald* refuting an earlier statement in British consular reports that Japan was dissatisfied. The Kobe *Herald* writer, after an interview with officials of the Sanyo Railway, reported those officials as saying that with twenty-four English engines and thirty-three American they "contemplated giving no more orders to British makers, but had ordered ten engines from the Baldwin Company and eight from the Schenectady. The price of the American engines was $10,000; the delivery from seven to nine months. English engines would cost $15,000, with delivery in from nine to twelve months. The

DERAILED ON ITS MAIDEN TRIP
On the State Railway in Norway

coal consumption of the American engines used to be great in comparison with the English engines because they were new to us. Now it is about the same as with English engines." Moreover, says this Japanese railroad man in a remark to be taken to heart by the Midland: "The sight feeding lubricator is found an advantage." Finally the *Herald* repeats a statement from the editor of *Engineering* (a leading English trade journal),

THE MIDLAND YARD IN ENGLAND
The American engines are being erected in the open



ERECTING THE FIRST AMERICAN LOCOMOTIVE IN FRANCE

alleging Japanese dissatisfaction with American locomotives. To this the *Herald* replies in courteous Oriental English: "This, we fear, in view as to the Sanyo Company's intention for the future, is a very misleading statement of the case."

Finally, one English writer has maintained that the tariff aids American exports—that it explains the cheapness of the American engine. A member of the Baldwin firm flatly denies that the tariff in any way aids the locomotive industry. "Indeed," he says, "the expense we are under in sending crews abroad with our engines throws the balance to the other side." In reality there is no secret about the locomotive phase of our industrial expansion; it is due to skilled workmanship and to business-like methods. "Wherever we have sent locomotives," said the gentleman quoted above, "we confidently expect repetitions of the order." Unless there is imitation abroad then, of our way of doing things, the American invasion is likely to become in time an occupation.

THIRTY YEARS' ADVANCE IN LOCOMOTIVE BUILDING

Two locomotives on the Denver and Rio Grande: the big consolidation engine typifies modern American railroading; the superseded little one was the "mighty iron horse" of the seventies

ACROSS THE ALFALFA FIELDS IN THE VALLEY OF THE PLATTE

THE PIVOTAL FARM OF THE UNION

THE THOROUGH ORGANIZATION AND THE INTERESTING AND FAR-REACHING EXPERIMENTS OF A NEBRASKAN MASTER FARMER — THE KIND OF HELP HE SEEKS — A POSSIBLE MID-CONTINENTAL SCHOOL OF PRACTICAL AGRICULTURE

BY

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Illustrated from photographs taken by the author

THE stake that marks the midway point between ocean and ocean is on one of the most interesting farms in the Union. This farm is Watson's Ranch, lying just outside Kearney, Nebraska. It is a commercial farm of 8,000 acres, stretching along the illimitable expanse of the Platte valley and ascending into the low-rolling hills of the prairie. The farm is remarkable because it is trying to solve, on a large and commercial basis some of the problems of agriculture in the new middle west, in a region of light rainfall and of serious seasonal droughts.

I am glad to contrast, in THE WORLD'S WORK, two such unlike establishments as those of Luther Burbank (described in the number for September) and H. D. Watson, because they illustrate so well the varied nature of agricultural problems and show how efficiently these problems are being attacked by men of great ability. It would be difficult to find two types of rural endeavor more unlike than these—one a patient search for new and beautiful varieties of plants and the discovery of laws, the other a masterful organization of a large business founded on the scientific application of agricultural principles.

THE IMPORTANCE OF MR. WATSON'S UNDERTAKING

The agricultural problems of the plains are new and largely unsolved. An experiment like this, therefore, has peculiar value for an immense geographical area. These problems are not older than a generation of men, for it is not longer than this that productive farming has succeeded herding on these plains. Every recurring year of drought emphasizes the importance of undertaking fundamental studies of the agriculture of the plains and of making readjustments of farm practice to climatic limitations. Much of the old-time practice of corn-growing must be given up in some of the drier parts, and other systems of agriculture

A BUNCH OF SHEEP

must be adopted. Even in this dry and hot year, it would be impossible, perhaps, to find any man more sanguine of the agriculture of his region than Mr. Watson is of his.

Nebraska is essentially an agricultural State. It is estimated that its people are about equally divided between the farm and the town. Yet the fear of drought must have had a retarding influence on the development of the State, for a recent census bulletin reports that "the smallest percentage of increase during the last ten years (of population for 1890-1900) is that shown by Nebraska, being less than one-half of one per cent." If this check proves to be only temporary, it will be due in large part no doubt to improved farm practice.

Every great experiment in farm practice is immensely important to the whole country, since agriculture affords so large a proportion of our national wealth. It is to be hoped that the completion of the twelfth census will give us more detailed information of the agricultural status than we have yet had. It is difficult to determine how many persons are directly interested in farming, for many farmers do not live on farms and many others are engaged in farming along with other occupations. Yet it is certain that agriculture is the largest single business, measured by the number of persons employed. The census of 1890 reported that the number of persons of ten years and over "engaged in each specific occupation" was 26,650,232. Of these persons agriculture, fisheries and mining had 9,692,859. Omitting lumbermen, miners, fishers, gardeners and others, it is found that the number engaged in real farming business is about one-third of the entire number of occupied persons. Not all farmers live on farms, for there is a tendency, apparently growing, for farmers to live in towns. In whatever way one looks at the problem, however, it will be seen that our self-sustaining farming population is very large, and that the

DAIRY CATTLE FEEDING ON ALFALFA STUBBLE

working out of difficulties in any part of the country has interest to a vast constituency.

HOW THE PROBLEM IS ATTACKED AT WATSON'S RANCH

The organizer and proprietor of this great Nebraskan farm is Mr. H. D. Watson, a New Englander and for the greater part of his life a business man. He has had varied experiences East, West and South. Search for health finally took him to central Nebraska. Here he was attracted by the cheap and fertile

THE UNTAMED, ILLIMITABLE PRAIRIE

natural meadows of the Platte. Land he bought, primarily to sell; but the agricultural possibilities of the country had to be demonstrated before land could be sold, and thereby arose the inquiry that led him into being a land-buyer and a farmer rather than a real estate dealer.

At first, his agricultural operations followed the customary lines of the region—the growing of grains. He was caught by the drought of 1890. He was forced to the conclusion that the farmer of central Nebraska must develop a business that shall provide for the contingency of carrying him over the dry years. This he could do in part by storing some of his surplus grain and forage. He should also be able to save more of the water that falls on his land in winter, and this could be accomplished by fall plowing, by preventing wash, by opening and deepening the soil by means of humus. He should discover some crop that will persist and, if possible, yield a fair return in the dry years. Mr. Watson thought of irrigation, but this is very expensive and it was not immediately available. Moreover, most of the farmers could not secure irrigation, and he wanted to aid them with the materials nearest at hand. It was in this dry year of 1890 that his attention was attracted to the behavior of a field of alfalfa standing on one of his pieces of land. This alfalfa withstood the drought. It set him to thinking. In 1893 he laid down twelve acres to alfalfa; now he has 2,500 acres, and he is sowing more.

To save the moisture, to utilize this moisture in the growing of the maximum crop, to dispose of this crop to the greatest commercial advantage, to prevent the deterioration of the land—these are the problems which Mr.

THE PIVOTAL FIELD—THE CENTRE OF THE UNITED STATES, EAST AND WEST

Alfalfa ready for the third cutting. The first and second cuttings are in the stocks

Watson has set for himself. They may seem simple enough to the uninitiated, but they are difficult of mastery. The fundamental elements in the attack of the problem are three: to grow alfalfa; to sell this alfalfa in the form of animal products; to use the manure for the growing of fruit.

The practical outcome of the business is a fight against drought. Alfalfa will endure much dry weather because of its habit of deep rooting. Like all good farmers, Mr. Watson believes in frequent shallow tillage in the growing season in order to reduce the evaporation of the life-giving moisture. Many farmers there are, even yet, who till their lands only for the purpose of killing weeds, but these men are far behind the times.

Alfalfa has been chosen as the fundamental crop because it thrives in the region when given proper conditions; because it gathers nitrogen from the air, and thus does not impoverish the soil of this expensive element; because its deep root system brings up food and moisture from great depths and constantly improves the physical condition of the land; because it is perennial, and thereby does not need to re-establish itself every year; and because it is an excellent food for domestic animals. By feeding the alfalfa to stock, rather than selling it direct, the farmer should be able, if he is a good manager, to obtain a double profit, to secure an income that is continuous throughout the year, to afford employment to a greater number of men, and to save an important part of the crop in manure. The proof that this general scheme can be made a practical one, in Mr. Watson's estimation, is the fact that he has been able to rent 1,500 acres of alfalfa for a term of three years at a rental of $7,000, and in the further fact that the income of the dairy already yields a like sum. This result is produced on land of an original selling value of $7 to $15 per acre and with a dairy of less than 200 cows.

To be successful in the growing of alfalfa requires a thorough preparation of the surface soil, and sowing early in the season when moisture is abundant and the land is cool. Sowing one week too late may mean a poor "stand" and an unprofitable series of crops. A fine uniform field of alfalfa may look to be a simple problem; but one has only to try it on a large scale to appreciate the skill that is required to secure it one year with another.

FARM COTTAGES ON WATSON'S RANCH

Mr. Watson finds that he can average three cuttings of alfalfa every year, and he has one field eighteen years old still in good condition. In some of his recent seedings he secured four cuttings. These cuttings average, for the year, from three to five tons of dry forage. This last August, when I visited Watson's Ranch, alfalfa hay was worth $10 a ton; this winter it will probably bring more. This price is high because of the drought; yet it is easy to calculate that there is money in alfalfa, and that a stated income is largely a question of acres.

Never can one see a more satisfying prospect than the great stretches of thick knee-deep alfalfa, purple with its bloom, or the

MR. WATSON, IN FRONT OF HIS RANCH-HOUSE

A THRIFTY YOUNG ORCHARD OF SOUR CHERRIES

herds of sleek cattle slowly feeding on the soft-green carpet of an alfalfa pasture; yet these sights could be seen daily at Watson's Ranch in this year of discouraging droughts. One felt that the soft low hills and the wide bottom-lands were overflowing with fatness.

A GREAT FRUIT FARM

The success of alfalfa having been demonstrated, Mr. Watson's next important agricultural problem was the growing of fruit. In this he had few precedents, and it was thought that this region is not adapted to fruit. Yet, of peaches he now has 6,000 trees; of plums 3,500; of apples 3,000; of cherries 5,500; and other kinds of fruits. Aside from the apples, many of these fruits are in bearing, and so well assured is he of the practicability of this pomological enterprise that he has 60,000 young peach trees, 5,000 young plum trees, and many young apple trees from which to make plantings in 1902 and 1903. The fruit is as fair and as good as that in any other region. Most of the fruit is planted on the low hills, on land worth $7 and $8 an acre, where the soil is hard and dry. The rows of trees follow the contours of the hills, and a furrow is plowed just above them; thus is the rainfall caught as it flows down the slopes, and is thereby applied directly to the roots of the trees. The best of surface tillage, pruning, and all the approved methods practised in the Eastern States or on the Pacific slope are here employed or adapted. For all this fruit the prairie states may be expected to furnish a good market.

Whilst alfalfa, stock and fruit are intended to be the leading enterprises of this great ranch, other farm crops are not neglected. An alfalfa sod affords an excellent preparation for other crops. When plowed under it greatly improves the physical condition of the soil and affords a large store of quickly usable plant-food. In this humus—rich soil—the moisture is held. The special crop is planted as early as possible in order that the moisture of the early season may be utilized. Thereafter, frequent surface tillage may be expected to carry the crop through even a dry season. In this present dry year, and without irrigation, Mr. Watson is harvesting good crops of rye, corn, and other things.

The material equipments of Watson's Ranch are now nearing completion, and they are remarkable in variety, extent and completeness. In all successful enterprises the man is

more important than the equipment; yet a catalogue of the main features of the equipment will serve to illustrate the breadth of the establishment. The main barn on this ranch is said to be the largest of its kind. It is 317 feet long and 96 feet wide. With each cow in her own stall there are accommodations for 350 animals. It has storage capacity for 700 tons of hay. An immense brick silo holds 1,200 tons, or the product of 90 acres of corn. Other barns, enormous tool sheds, a creamery, buildings to accommodate 300 laying hens and 2,000 chicks, workmen's cottages, a school-house on the premises, comprise other features of the establishment.

All this great development is the result of a personality. Well past fifty years of age, spare of build, quick in movement, well preserved, Mr. Watson is the typical Yankee who has been drilled and steeled in the school of hard personal experience. He is a general in power of quick analysis and forceful organization. He sees things broadly. He quickly separates the great things from the small ones, a power that few men possess. His optimism is unbounded, else he could not have accomplished in thirteen years of his maturer life what would have been too great a task for the lifetime of most men. Unlike many men who have forced their way against great odds, he is an admirer of the student and scientist. For foremen he wants ambitious college-trained men.

Such a man cannot be content with the mere establishment of a successful farm, however great the enterprise may be. Mr. Watson abounds in schemes—schemes which are bewildering in their boldness and captivating in the fertility of their imagination, and yet they do not run riot. Some of them reach far beyond this little farm of 8,000 acres on the River Platte. Ultimately, if the plans come to full fruition, this ranch will be a farm school for the central west, for Mr. Watson is by nature a philanthropist. Immediately, however, he is planning for a co-partnership farm, on which worthy and energetic young men can be given an opportunity to become model farmers and to gain a competence. He would make 100 farms of 80 acres each, with complete sets of buildings. Each farm will be a part of one gigantic dairy ranch, with a central manufacturing department, each farmer to rear and maintain all the stock of which he is capable. The central dairy herd is to be maintained at approximately 400 head, and the minimum standard butter yield is to be 400 lbs. per cow annually. His creamery butter now sells for 20¾ cents, whereas common country butter sells for 11 and 12 cents. This difference, in connection with abundant cheap feed and well organized labor, is sufficient to turn a handsome profit. For persons of special abilities he would build greenhouses, set fruit plantations, and establish other particular industries.

However much or little may come from these bold and altruistic ideals—and one who knows the man expects much—Mr. Watson has already demonstrated possibilities for Nebraskan agriculture which the people will one day be proud to recognize.

ALFALFA READY FOR THE THIRD CUTTING, IN MIDDLE AUGUST

REAR-ADMIRAL SAMPSON

A CAREFUL REVIEW OF A MODEST, PATRIOTIC, AND BRAVE CAREER — THE FACTS ABOUT THE CUBAN BLOCKADE AND THE BATTLE OFF SANTIAGO AS SHOWN BY THOROUGH STUDY OF THE WAR WITH SPAIN — THE BEST TYPE OF EFFICIENT AMERICAN MANHOOD

BY

IRA N. HOLLIS

PROFESSOR OF ENGINEERING IN HARVARD UNIVERSITY

[Rear-Admiral Sampson has at his own request been relieved from active duty, on account of his health. He will be retired, by age, next year.]

GRADUATES of the Naval Academy of the year 1878 cannot fail to recall with pleasure a course of lectures delivered in the Department of Physics during their junior year. The system of instruction at that time was based almost entirely upon the study of text books, and instructors seldom supplied anything more than was found on the printed pages. The work, therefore, became monotonous in the extreme, and the occasional lectures on physics supplied an agreeable change. One of the reasons for this modification of the ordinary routine was the growing importance of electricity on board ships and the conviction on the part of the officer in charge of the department that cadets ought to have a practical knowledge of a science which seemed on the eve of great developments. The lecturer never failed to impress his students as he stood quietly behind a long wooden desk covered with apparatus set up for experimental demonstration. His speech came slowly, expressing in the fewest possible words the ideas and facts that he wished to place before his audience. His sentences were models of clearness and accuracy; but what I have since come to regard as marvelous was the uniform success of his experiments. I do not recall a single failure. He never had to apologize for the behavior of the electric current or to lay blame on the atmosphere. Everything did precisely what he said it was going to do.

This was my first real view of Admiral Sampson, then commander and head of the Department of Physics; although I did not for a long time afterwards realize the force that lay behind his gentle manner and low voice, any more than I understood the amount of preparation necessary to bring his experiments to a successful conclusion. This work in his class-room involved a similar careful adjustment of the means to the end that was demanded twenty-two years later on the Cuban blockade, and he bore the larger responsibility with the same great ability that he had displayed in the earlier instance. He made adequate preparation in both cases so far as the materials placed in his hands permitted.

It is this aspect of the war with Spain which is most valuable to us as a nation. The two naval battles attained their importance not through any heroic struggle against odds, or against an enemy even approximately equal to us, but rather through the political results which followed. Our hysterical treatment of the men who were fortunate enough to be the instruments through whom the victories were won should be a warning to us not to run after the spectacular and thereby to lose sight of the fundamental causes. If the Spanish war stands for anything in the Navy, it stands as a lesson on the value of being prepared, and that Admiral Sampson was by disposition and previous training admirably fitted to teach us.

He was appointed to the Naval Academy from Palmyra, New York, in September, 1857, and graduated in the spring of 1861, having just passed his twenty-first year. His career as a midshipman was in every way creditable, as he was first in his class and adjutant of the cadet battalion in his senior year. The quality of mind which gave him success in everything he undertook seems to have been untiring industry and patience,

rather than exceptional brilliancy, illustrating in himself the most valuable lesson a student can learn: that the way to accomplish a task is to begin it and keep at it. In 1861, he received his first commission and was ordered to the frigate *Potomac*, but he was soon at Newport to instruct midshipmen at the Naval School and on the practice ship. He joined the ironclad *Patapsco* towards the end of the Civil War, and was on board when she was blown up by a torpedo in Charleston harbor. Many were killed, but fortunately for the country he escaped, to serve in another war that had its immediate cause in the blowing up of another ironclad. The years of peace intervening began with a long period of neglect of the Navy, and few officers found opportunities to distinguish themselves at sea. Admiral Sampson served in the several grades from lieutenant up to captain on a number of ships, always with efficiency and credit, but his most notable service was on shore. He went back to the Naval Academy as assistant to Professor Lockwood, and later he succeeded him as head of the Department of Physics. From 1874 to 1878, he was again at the head of the Physics Department. During this period he twice commanded the practice ship for the cadet engineers, a most happy selection for them, as he combined good seamanship with a proper understanding of the importance of engineering training to the new Navy.

My own acquaintance with him during these two cruises was fortunate for me, as it left a lasting impression of his unvarying attention to duty. I never saw him excited or disturbed, even when in Philadelphia the majority of the cadets managed to get on shore without leave. He quietly called us on deck at midnight to be mustered. There was no reprimand and no speech on the occasion, but none of the delinquents tried it again. The worst punishment they got was the notification by their classmates that they had been caught by the commanding officer, who simply left them in uncertainty for a day or two and then warned them not to repeat the offense. Many of the engineers who served as students under him during these two summers held responsible positions on the Cuban blockade.

From 1882 to 1885 he was on duty at the Naval Observatory, and also served as a member of the International Prime Meridian Council in 1884. In 1885 and '86 he commanded the torpedo station at Newport. When the Board of Fortifications and Other Defenses was organized he became a member, and was thus instrumental in promoting the system of coast and harbor defenses which subsequently assumed so much importance to us. The Board had a joint membership of army and navy officers, and Sampson was thought by many naval officers to have consented to too much army control in coast defenses, but he was undoubtedly honest and free from corps prejudice in his opinions. In 1886, while still a commander, he became Superintendent of the Naval Academy, where he stayed for four years. He was also a delegate to the International Maritime Conference during this time. His services in improving the system of training at the Naval Academy cannot be overestimated. His fourth tour of duty ending in 1890 completed thirteen years at the school, during which time the majority of the officers graduating between 1868 and 1893 came for one or more years under his influence as students. Thus there were few officers in his squadron who had not met him or served with him in some capacity. It would be difficult to fix the great value of this association during a period when the Navy was stripping off its sails and putting on armor. From 1890 to 1892 he commanded his first modern steel cruiser, the *San Francisco*, with station on the West coast of North America. His ship was in South America during the Chilean Revolution, and the three cruisers in Iquique when the *Itata* was surrendered were the *San Francisco*, the *Baltimore* and the *Charleston*, the first commanded by Sampson, the second by Schley and the third by Remey, subsequently to hold the most important command around Cuba.

Upon the completion of the cruise in the Pacific he was ordered to the Washington Gun Foundry as superintendent for a short time, and then he became Chief of the Bureau of Ordnance. His four years of service in this office contributed largely to the design and construction of the ships which he afterwards commanded. His duties brought him much into contact with other officers and with the contractors who supplied gun forgings and armor for the new ships. One of

the Bureau officers remarked to me when Captain Sampson left to take command of the *Iowa:* "He was the most satisfactory and clear-headed man I ever did business with." Up to the close of his career in the Department he was scarcely known outside of the service, so that his entire career seems to the great newspaper-reading public to be confined to the Spanish War, yet he has always performed every duty assigned to him with conspicuous ability and with singular modesty. He was with it all a most approachable and fair-minded officer—never enthusiastic, never demonstrative, but always kind and considerate in his dealings with others. He bore an enviable reputation as he had the respect and affection of those who served under him. If a vote of the Navy had been taken to determine the officer most trusted by the entire service it would have been Sampson by a great majority.

Such he was when he came to the command of his first battleship in the squadron under Admiral Sicard. When the ships were assembled at Key West and the commander-in-chief was invalided home, the first thought at the Navy Department was of the best man to succeed him in case of war. All of the men who had large experience in the Civil War were gone, and the Secretary turned naturally to an officer in whom the Navy had the most unbounded confidence. He was the captain of the *Iowa*, our latest battleship; he was very near his promotion to commodore and was, besides, the senior officer on the station after Admiral Sicard departed. Without any seeking on his part, but solely with the best interests of the country at heart, Secretary Long ordered him to take the chief command on March 26, 1898, and his flag was forthwith hoisted on the armored cruiser *New York*. At this time the ships were busily preparing for war. The *Maine* had been destroyed on February 15th, and the court of which Sampson was president had reported on the cause of the disaster. He had been temporarily absent from his ship on this investigation for some weeks during February and March. The report of the Board on the *Maine* was calm and dispassionate, demonstrating again his fitness for large responsibility. As the course of events drifted rapidly into war he kept up the incessant target practice and preparation inaugurated by his predecessor. Amongst the seamen it was no longer a case of getting ready for a possible contingency, but a willing practice for war which was regarded as inevitable. Never were more willing crews or more effective commanders.

On April 1st, picket boats were posted at night outside of the fleet to prevent a possible surprise. No one knew what torpedo boats might lie concealed on the coast of Cuba, and it was the part of wisdom to make sure of a warning of their approach. All ships were painted a dull lead-color, and the woodwork was removed from places where it could be spared in order to avoid the danger of fire. Thus they were entirely ready for the blockade when the fateful order came on April 21st. Captain Sampson was made acting Rear Admiral by order of the President immediately after the declaration of war. He was thus jumped over officers of the Commodore's grade and became for the time-being senior officer afloat, and his promotion was accepted with good-will even by those whom he passed. There seems never to have been any question of his ability to plan and establish an effective blockade of the coast of Cuba, but it was reserved for the Government publications to disclose the fact that he had the dash necessary for a commander, as well as organizing power.

Soon after he took command, he drew up a plan for the capture of Havana and with the concurrence of the commanding officers of the fleet recommended it to the Navy Department. The Secretary, doubtless advised by the Board of Strategy, disapproved and instructed him not to expose vessels of his squadron to the fire of the batteries of Havana, Santiago de Cuba, or other strongly fortified ports in Cuba, unless the more formidable Spanish vessels should take refuge within those harbors. This order prevailed throughout the war contrasting strongly with the orders given to Admiral Dewey: "Proceed at once, to Philippine Islands. Commence operations at once, particularly against Spanish fleet. You must capture vessels or destroy. Use utmost endeavors." The conditions in the two oceans were different. Some risk had to be run in the Pacific on account of the undefended state of our Western coast and the absence of a naval base in Asiatic waters. In the Atlantic, the fleets at our

disposal had to be distributed to repel attack at any part of the coast and, in addition, to establish an effective blockade. It seemed therefore good policy to keep all ships intact until the threatening Spanish fleet had been met. Nevertheless, it is an open question if Sampson's plan was not the better. He renewed his request to be allowed to attack Havana with two battleships, three monitors, an armored cruiser, and several ordinary cruisers, and he had strong hope up to the day when the order to blockade arrived that the Department would allow him to try it. He wrote to the Secretary on April 9th:

"I sympathize with all you say about guarding our big ships against a possible serious loss while the enemy's fleet is still intact. At the same time, I regard it as very important to strike quickly and strike hard as soon as hostilities commence. Havana is well defended by three or four batteries to the eastward of the entrance, mounting guns from six to twelve-inch calibre. On the western side of the entrance there are three batteries, the guns varying in calibre from eight to twelve-inch, and two mortar batteries. All the batteries face seaward, and those to the west of the entrance are quite near the shore. All are open batteries, with heavy traverses between the guns. The guns and people who serve them are quite unprotected."

"These batteries are well calculated to keep off a fleet from seaward, which approaches to within a moderate distance of a few thousand yards. I do not think they are well placed to resist an attack (for instance, the western batteries) from the westward and close in shore, where the batteries would be exposed to a flank fire, or to the fire of our big ships at short range, where the secondary batteries would have full effect. Even under these circumstances the ships must have such a heavy fire that the men in the batteries would be overwhelmed by its volume. Before the *Puritan* and *Amphitrite* arrived I was not entirely sanguine of the success of such an attack. Since their arrival yesterday I have little doubt of its success."

In case his request had been approved, he would have appeared before Havana on April 22, and we should probably have heard of its fall before the battle of Manila was fought. It is possible that the two great victories would have ended the war in one week, thus sparing us much bloodshed and disease. It seems unfortunate that he was thwarted in this request, and that the Department considered it necessary not to allow him to expose his ships to heavy shore batteries. Upon him alone, at the outset of the war, rested the responsibility of carrying on the campaign against Cuba, as the army was not ready and the other fleets were held in reserve for a possible attack upon the coast cities.

The first duty of the Government was to provide an army, and while recruits and arms were hurried forward the fleet around Cuba was increased by a number of small vessels converted from merchant ships and yachts. Still, Admiral Sampson never had a good supply of high-speed despatch boats. The torpedo-boats were too delicate for this service, but they were freely used; and the great merchant ships taken from the Atlantic service were too large for anything except distant scouting. Their failure to detect Cervera's fleet at Santiago, although some of his ships were in plain view to a vessel passing within four or five miles of the port, was probably due to their size. Information was usually forwarded to the flagship, therefore, by cable from a West Indies station, by way of Washington and Key West or Cape Haytien, whence it was sent by the swiftest craft available. In the delays which inevitably occurred it was good judgment in most cases that kept the ships at the right spot for effective service. The fleet always moved promptly after orders were received, as shown by a telegram two days after the declaration of war stating that Mariel, Havana, Matanzas, and Cardenas were blockaded. A sharp lookout was kept for merchant ships conveying supplies to the Spanish army, and a number of supplies were soon taken.

The general command was very heavy for one man, and two Commodores were soon ordered to assist the Commander-in-Chief, one to have charge of the naval base, and the other to serve on the blockade. This permitted Sampson greater freedom of movement. In a telegram of April 30th he was informed that four armored cruisers and three torpedo-boat destroyers had left Cape Verde, and, in a letter dated the 29th, it was suggested that their destination was San Juan. The Department also impressed upon him "the importance of confining the enemy in San Juan." To comply with these orders it was necessary that the main body of large ships should move quickly toward Porto Rico, and accordingly a squadron, consisting of the flagship, two battleships, two monitors, two

cruisers, and one or two auxiliary vessels, sailed from Key West on May 4th. They expected to make the voyage in five days, but were much delayed by the monitors, which had to be towed the greater part of the distance in order not to exhaust their coal supply. The port was reached early on May 12th, and Sampson immediately went in with his whole fleet to develop the harbor and destroy the shore batteries. He soon made sure that no Spanish vessels were there. The bombardment of the forts at San Juan has been criticized because it seemed to the casual reader like an unnecessary attack upon the city, but it was not an attack upon the city. From the military point of view, it served a most useful purpose in training the crews to stand fire. They had had no experience in war, and their commander did not know how soon they might be called upon to go into action against a well-armed fleet. It was, therefore, only the part of prudence to season them in handling the guns under fighting conditions. The Admiral's excellent judgment is shown by his immediate determination to proceed westward, to cover the Windward Passage and the approaches to Havana. He had no knowledge of the whereabouts of the Spanish fleet, and no means of ascertaining that Cervera had arrived at Martinique about the time he reached Porto Rico. The Spaniards had probably been warned away from San Juan, their objective, by the presence there of the American fleet, made known to them by information supplied through the newspapers. On the 15th of May a torpedo-boat was sent to the north of Hayti for news, and a cable was brought out stating that the Spanish fleet was at Curacao on the 14th. Instructions were immediately sent to the auxiliary cruisers stationing them where they could sight the Spanish ships if they proceeded to the northwest. The Admiral placed the *St. Paul* and the *Yale* between Jamaica and Hayti, the direct path from Curacao to Santiago, and the *Harvard* in the Mona Passage, near San Juan. He further telegraphed the commander of the *Harvard*: "Destination [of the Spanish ships] unknown; probably Santiago de Cuba or San Juan."

It began to be rumored on May 19th that the Spanish squadron had gone into Santiago, as Admiral Sampson had correctly guessed while off the north shore of Hayti. The rumor was partially confirmed shortly after the flying squadron had left Key West by a telegram from the Navy Department that the report of the Spanish ships being at Santiago "might very well be correct," and he was advised to send a squadron off Santiago. In the meantime several of the larger scouts had been ordered to cruise between Jamaica and Cuba for the purpose of testing the truth of this report. For the time being, however, the admiral decided to hold the flying squadron off Cienfuegos until the report could be verified absolutely. The reason for this decision is given above. On the 21st information reached him of so definite a nature as to decide him to send two different dispatch boats with duplicate orders directing the squadron to leave Cienfuegos for Santiago if the commanding officer was satisfied that the Spanish ships were not at the former place. He supposed that communication had been established with the Cubans on shore, so that definite information about the harbor had been obtained, and he therefore assumed in his orders that the flying squadron would be off Santiago on May 24th.

A second telegram was also received by him reporting that the Spanish fleet was soon expected in San Juan. This led to the occupation of the Bahama channel by the larger ships available from the blockade. In consequence of the apparent inefficiency of the flying squadron on the south coast of Cuba, and a telegram from its commander that his ships did not have coal enough to maintain the blockade, the department sent peremptory orders for them to remain at all hazards, and on the 28th Sampson was asked how long it would take him to reach Santiago and how long he could blockade. He replied on the 29th that he could blockade indefinitely and would like to start at once. The uneasiness at Washington decided the question and he was ordered to go. His ships arrived on the 1st of June, and soon after effectually closed the port. There was never a day or night after his arrival that the Spanish fleet could have got out unmolested, and during the period of highest efficiency which began after he had been before the city four or five days the Spanish fleet could not have left without inviting complete destruction.

It was during this blockade that the most trying part of the war began. The first

problem was to station the fleet so that the Spanish fleet could not reach the exit to the harbor before being sighted, and so that our ships would be safe from torpedo-boat attack. The *Merrimac* was sunk in the channel on June 3d, but failed to block the entrance as planned. She was intended to prevent the exit of a single ship that might interfere with the transportation of troops from Tampa. The five battleships, two armored cruisers and various smaller craft were disposed in a great crescent around the mouth of the harbor. The stations of the ships and the plan of attack were fully described in an order from the commander-in-chief. Commanding officers were instructed "If the enemy tries to escape the ships must close and engage as soon as possible, and endeavor to sink his vessels or force them to run ashore in the channel. It is not considered that the shore batteries are of sufficient power to do any material injury to battleships."

One of his first plans was to establish a coaling station in some safe harbor near the blockade. He promptly threw a force ashore at Guantanamo Bay, about fifty miles away, and subsequently sent some ships to destroy any shore batteries that existed in the neighborhood. It soon became the custom when the sea was not smooth enough to coal on the station with ease to send one ship at a time to this rendezvous. Specific orders were issued about closing up the line during the absence of any ship for coal or repairs. The blockade finally settled itself down into the following routine: At night three picket launches were sent in to points one mile from the Morro. On a circle of a radius of about two miles in length, with centre at the Morro, were stationed three smaller armed dispatch vessels, and within a circle of a radius of four miles were arranged the larger vessels in a great crescent. All vessels were ordered to keep their engines turning slowly, and the battleships were instructed to take turns in steaming close enough into the harbor to throw a searchlight on the entrance, where the light was kept steadily during darkness. It was at first found difficult in the rolling and pitching of the ships to hold the great pencil of light steadily on one point, but a little practice and renewed admonitions from the commander-in-chief rendered the men so expert that there was never a moment when a vessel could get out of the harbor undetected. The flanking ships were as a matter of precaution directed to keep one searchlight on the coast along each side of the entrance.

The orders were very carefully drawn to make sure of no misunderstanding, and we have the undisputed testimony of the Spanish officers to the effectiveness with which they were carried out. The coaling problem was only one of numerous others which presented themselves. One of the greatest needs was fresh water for the boilers, and few of them were able to get through the blockade without cleaning and scaling. This formed one of the weaknesses of the fleet, as fires were constantly being shifted from one boiler to another for the purpose of getting men into them. As the Spanish fleet could choose its own time for coming out, it was therefore certain to catch some of the battleships unprepared to make their highest speed.

There was no stroke of genius needed here, only the faithful intelligent attention to duty which rendered the ultimate destruction of the Spanish squadron a matter of mathematical precision. The fortifications were bombarded from time to time to give the men occupation and practice as well as to discourage the enemy. Sometimes the ships approached within a mile of the batteries. On June 3rd the Admiral received a cable message that General Shafter expected to start from Tampa on the next day with eighteen thousand men. He was evidently impatient over the delay which followed, as he cabled on the 6th: "Bombarded forts at Santiago today at 7:30 A. M. to 10 A. M. and have silenced works quickly without injury of any kind though stationed within two thousand yards. If ten thousand men were here, city and fleet would be ours within forty-eight hours. Every consideration demands immediate army movement; if delayed, city will be defended more strongly by guns taken from fleet."

His intention would have been to attack the forts at the entrance of the harbor immediately after having silenced them by a heavy fire from the fleet. Thus the entrance would have been placed within control of the attacking force, and the ships could have gone in, rendering it impossible for Cervera's fleet to hold the harbor or the Spanish army to remain in the city.

On June 11th, just before the departure of the army transports, an officer was sent to a hilltop overlooking the entire bay to ascertain positively if all the Spanish ships were in the harbor; thus the Americans finally made absolutely sure that no part of Cervera's fleet had departed and that the army could be brought to Santiago without fear of molestation. The troops did not arrive, however, until June 20th, after the fortifications around the city had been materially strengthened. The squadron was instructed to assist the army by bombarding the coast at various points, thus drawing off attention from the landing of troops at Daiquiri where there was no resistance. A large number of steam launches and cutters were supplied by the fleet for disembarking the troops.

In the latter part of June, upon the departure of some Spanish vessels for the Suez canal, it was proposed to detach several ships for service in the Philippines or on the coast of Spain, but they were not sent, although named and their flag officer selected. When notified of the proposed reduction of his fleet, Sampson made immediate preparations for torpedo attack on the Spanish ships, cabling to the Department: "Regret to resort to this method because of its difficulty and small chance of success, torpedo boats being subject to small arms and rapid fire-guns from the shore for a long distance. I should not do this were the present force to be kept here, as it now insures capture which, I believe, will terminate the war."

On the 2nd of July, a visit to General Shafter was planned to arrange an attack upon the batteries at the entrance, and Sampson expected to make an assault on the Morro or Socapa battery with marines under his command. It is not the place here to rewrite the history of the naval battle of Santiago. The Spanish fleet came out against overwhelming odds half an hour after the *New York* had left, and lost everything. The ships selected their own time and appeared at the entrance of the harbor during Sunday morning inspection on the American ships. Nevertheless, the *Iowa* fired a shot on the first ship before the second one could emerge from the channel. The battle was fought under the orders and plans issued by the Admiral, as there was no emergency or crisis which demanded a change. The result would have been the same if Sampson had been entirely out of sight, as each captain knew exactly what to do and did it. The only unusual spectacle was that of the *Gloucester*, an ordinary converted yacht, carrying a few small guns, steaming in to intercept the two torpedo boats. This was not in the orders, and only a courageous and clear-headed commander would have had the wit to see that these two dangerous ships must be kept away from the battleships at all hazard.

So far as the Spanish fleet itself was concerned, its fate was sealed from the day that Admiral Sampson arrived off the harbor, and good old Admiral Cervera knew it. His attempt at escape may not have been conducted with the highest skill, but there can never be any question of the spirit of self-sacrifice and the heroism which carried him out to no uncertain fate. Our people realized this soon after the battle, but they have not yet come to an understanding of the amount of preparation demanded or the inflexible will of the commander-in-chief who never for a moment allowed his attention to be turned away from the hole through which the Spaniards must emerge. A few days after the naval battle, the city surrendered to the army and Admiral Sampson was released from the blockade. True to his prediction the war was over. He remained on the station for some weeks, nevertheless, and finally came to New York with his fleet. We have rarely had in the experience of our country a more thrilling sight than the gray ships, moving slowly up the North River to fire a salute over the tomb of General Grant. A few shot-holes told the tale of the battle and left an impression of the insignificance of the Spanish offense.

Immediately after the treaty of peace was signed Admiral Sampson was temporarily absent from his ship to assist in the evacuation of Havana by the Spanish. A commission was appointed to adjust certain details, and he was a member of this commission. He resumed command of the fleet after this duty was completed, and remained for about a year the commander-in-chief of the North Atlantic squadron.

In this article there has been no intention of touching upon controversial points or of belittling the work of any officer, but simply to state in brief what Admiral Sampson has

been to the naval service. He has been badly treated outside of the service, which understands him and trusts him. After the campaign in Cuba it would have been basely unjust on the part of the President not to give him the proper reward of his services. The public has been stampeded into an hysterical attitude by that section of the press which was on the alert to get the earliest news of the war, even at the expense of betraying his plans and movements to the enemy, and the recommendation of President McKinley and the Navy Department has been treated as a conspiracy. Certain foolish politicians have contributed to the perpetration of an act of cruel ingratitude. No man ever represented a better type of American citizen. He has the calmness, modesty and self-poise most characteristic of Lee, Grant, Farragut and other great men who have borne arms for the nation, and no man could exhibit in his daily life a more unassuming and democratic conduct.

The two things which the public seem to hold against him are, first, the telegram that was sent announcing the victory and, second, the endorsement upon the application of a warrant officer to be promoted to commissioned rank. The telegram was sent away in haste, when there were many other things to do, as it was his duty to notify the department as quickly as possible. While the reference to a Fourth of July present might have been omitted without taking from the clearness of the telegram, he was entirely right in saying that the victory had been gained by the fleet under his command. It was under his command, and it had been held together for this battle during weeks of anxious study and care. Although the commander-in-chief must take responsibility for all communications signed by him, attention has been called by various writers to the conditions under which this telegram was sent. The last ship of the Spanish squadron had run toward shore after surrendering. She was thought to be sinking and Sampson was anxious to save her if possible. His ship was engaged in the difficult task of literally pushing the *Colon* farther up on a slanting beach where she could not sink far. He was, furthermore, exceedingly anxious about the condition of his own ships and the fate of the Spaniards who had landed on Cuban soil. Under these circumstances the wording of a telegram seemed doubtless unimportant compared with the other duties around him, and he allowed a junior officer to write it. He himself has never attempted in any way to shelter himself behind his subordinate, nor would he, but it must always seem unfortunate that he was not better served.

The indorsement on the application of the gunner to be appointed an ensign in the Navy should never have been given to the public. It was written for the information of the Secretary of the Navy, and was not couched in terms especially agreeable to a public which is easily swayed by a fancied reflection upon the social equality of American citizens. We know that there are, and must be, social distinctions, and yet a public statement to that effect seems offensive. Doubtless, the Admiral had in his mind the possible opening of the Navy to political appointments, the evil effects of which we have had many examples in the organization of the Army for service in the field. It was, furthermore, prompted by an earnest desire for the good of our Navy.

The public is in danger of doing great injustice to a man who has served the nation faithfully and well for nearly half a century. The career which makes him a commanding figure to the men of the Naval service extends over this entire period, while that which places him securely in our history is confined to the Spanish War.

In the heated controversy which has grown out of the Naval campaign we are likely to lose sight of essential considerations. As a matter of fact, the war produced few heroes in the ordinary sense of the word, unless we apply it to the enlisted men in the turrets and machinery compartments of our ships at Manila and Santiago. The man who could sweat it out in a water-tight compartment for hours, and then cheer at the sound of a gun from an enemy he could not see, had the elements of heroism in him. He was at least prepared to die under the most trying and nerve-racking conditions. So far as Sampson is concerned, his fame can very well be left to posterity, when the exact wording of his communication will not weigh against what he has actually done. He can accept philosophically the verdict of the multitude, well knowing that popular favor is fickle. Newspaper clamor is not history, and he can afford to wait.

PLACE DE LA BASTILLE, PARIS

PIAZZA DEL POPULO, ROME

Examples of the dignity of open spaces. The first secured to the people, but not yet elaborated, the second architecturally complete

THE BEAUTIFYING OF CITIES

A COMPARISON OF THE GROWING BEAUTY OF THE WORLD'S MUNICIPALITIES — THE IMPULSES THAT ARE MAKING FOR IMPROVEMENT

BY

CHARLES H. CAFFIN

FOUNTAIN OF THE INNOCENTS, PARIS

SHOULD we wish our cities to be beautiful as well as prosperous? If so, in what ways may they be beautified, and by whom?

I suppose there is not a city in this country of which its own citizens, at least, are not proud. In what does their pride consist? Primarily, no doubt, in the fact that their city offers them an opportunity of successful work and investment. The instinct of self-interest, of self-preservation even, stimulates the pride. Moreover, the citizens have put their time and work and energy into it and have put back into it much of the earnings of this expenditure and continue to reap a compound interest. Their pride is a personal one in their own achievements, as well as the impersonal one of attachment to the city. We have all observed this action and reaction of enterprise and loyalty in the case of smaller cities; and recognize its naturalness and value. But in bigger cities this whole-hearted eagerness for the common welfare is apt to be weakened by selfish individualism. In some of our biggest cities, where there should be the biggest scope for pride and loyalty, the individualism seems to be most rampant.

To state the matter boldly many a little Western town, that is only just beginning to show its roofs above the prairie, is more public-spirited in its loyalty, and exhibits a more jealous pride in its outward and inward condition than a metropolis like New York. The reasons for this are numerous. The larger the community, the more difficult does it become to secure cohesion and coöperation. Differences of races, of interest and of degrees of wealth and poverty, as well as the large area over which the population is spread, render unanimous action impossible and even partial coöperation much more difficult. Again, our entire ignorance of more than a few of the numbers who surround us, the intense competition that the numbers produce, the need to struggle and the absorbing interest as

well as necessity of struggle, hurl men back into themselves and lead them to concentrate all their energies upon home and business. It is no longer all for all; but each for self and devil take the hindmost. To him, therefore, is apt to fall considerations of the common welfare.

Indifference, moreover, results from another cause. A large number of people, the majority in fact, have no consciousness of the

PIAZZA DEL POPULO, ROME. ST. PETER'S IN THE DISTANCE

A magnificent space forming the termination of the Street of the Corso. Architecture, sculpture and foliage complete the effect

desirability of beauty in a city. With them the highest consideration is the convenience or comfort of the city life; and in these respects such enormous improvements have been made within recent years that the city seems to represent everything that could be desired. "What is this beauty anyway?" they exclaim. Perhaps they were in Paris during the Exposition when the omnibus system proved itself entirely inadequate to accommodate the crowds who wished to be carried. They come home and rail against the miseries of it and extol the superiority of their own system of rapid transit, though the latter is not without its drawbacks. Then they did not have a decent steak all the time they were in Paris and the oysters—but the foreigners don't know what oysters are! Every time it is the conveniences and comforts or the lack of them upon which they harp. The dignity or beauty of Paris, while it cannot have escaped their notice at the time, has not been brought home in their hearts as a thing that it would be desirable to emulate in New York. Yet, if they had learnt from the foreigner any wrinkle that would improve their own business they would be quick to adopt it.

Yet may not this same beauty be just such a wrinkle? I think it is worth to the Parisians about $200,000,000 a year. Paris caters for the world, and its main store in trade is its beauty, which it keeps on increasing, and the

PIAZZA NAVONA OR CIRCUS AGONALIS, ROME

One of the fine breathing spaces of the city with continual refreshment of running water

treasures of its works of art. Poor impoverished Italy, where would she be today if it were not for the beauty of her cities, much of it created four and five hundred years ago, on which now she is gathering a dividend of $90,000,000 annually?

But I hate to dwell upon this sordid part of the question. There is another and a higher one in the betterment of our own lives, a worthier memorial to the energy and enterprise of the community. In many directions our lives are being bettered. Libraries are being built or enlarged; finer court-houses, state-houses, banks and public buildings attest the desire for betterment and for fuller expression of the wealth and ambition of our communities. Only in the wider, more comprehensive matter of the city's beauty as a whole is there a marked apathy: in those matters, in fact, which primarily come within the purview of the municipal authorities. The improvement, so far, has been mainly the result of individualism; the fruits of competition, or the act of a single individual as in the case of the branch libraries in New York, or of a handful of individuals as in that of the Metropolitan Museum or, again, it has been the act of an individual force in the city government, as in the case of the Boulevard, now regarded

COMEDY THEATRE AND SCHILLER PLACE, BERLIN

Compare this with the effect of an opera-house on a crowded street, in the matter of convenience and safety as well as of beauty

HANOVER STREET, EDINBURGH

One of the many instances in this city of a long street interrupted or terminated by some important architectural or sculptural feature

RUE DE RIVOLI, PARIS

This illustrates the beauty and convenience of the arcaded sidewalk fronting on beautiful stores

as a continuation of Broadway, in New York, which must always be set to the credit of Boss Tweed, to whom also we owe the glory of Central Park. Whatever else may be said of him, he inaugurated a scheme for the beautifying of the city which has only been equalled in magnitude by the scheme for increasing the convenience of the city through the underground rapid transit service.

For we are gradually reaching the gist of this article, that something more is necessary in a city than the improvement which ensues from the investments of individuals; that there are larger considerations, such as the laying out of streets and open spaces, the beautifying of those already in existence and the various public utilities, lavatories, drinking fountains, lamp-posts, street signs and the like; all of which are properly the concern of the community and come within the control of the municipal authorities. In a word, while the desire to beautify the city must have its origin in the individual, and individualism will do a great deal to promote the beauty, ultimately it is upon the municipal authorities that the aggregate form of individualism must act to secure the wider possibilities of beauty. A sentiment in favor of beauty must be aroused. Such sentiment in a democratic city will have to be widespread in order to be effective; equally, it must represent the prevailing conditions by having as its leaders men of standing in the community.

A NATURAL CRAVING FOR THINGS BEAUTIFUL

And, briefly, what are the grounds upon which this sentiment should be based? At bottom they are the same as those which influence every man, as his position in the community improves. He surrounds himself with external evidences of his improvement; first, securing the necessities and then adding to them the beauties. If he is vulgar-minded he may do this in a way of blatant ostentation; otherwise, his recourse to beauty is a natural and honorable expression of a proper pride in himself, and a response, also, to that something within him of the ideal, the craving as his leisure and means permit, to bow the knee to something that is not merely material. That a man may blunder in his choice, and surround himself with things that a cultivated taste may refuse to consider beautiful, is beside the point. It is not what he achieves but what he tries to achieve, that I have in mind: the underlying motive towards beauty, which, whether blundering or intelligent, is, I repeat, an almost universal step in the evolution of the individual. Then consider another step; how the rich man shows a growing tendency to share his love of beauty with the community,—how he opens the grounds of his country mansion to the public; loans or gives of his treasures to museums, and recognizes in diverse ways the desirableness of being unselfish. Thus in these two fundamental facts—the universal seeking after beauty and the tendency of the rich to make others share in their objects of beauty—we have the rudimentary causes that should conduce to the beautifying of the city.

THE CITY THE HOME OF THE COMMUNITY

The city stands to the community as his home does to the individual. It indicates the degree of proper pride and cultivated ideas of life which have been reached. And in no uncertain language. The facts are too potent to be explained away; they are for all men to see and draw conclusions from. By their streets ye shall know them. It is thus that today we can gain from a visit to Venice a more vivid realization of the greatness of her people than from the written records of her Oriental commerce and struggle for supremacy. It is in the builded records of our cities also that an intelligent foreigner could read the strength and weakness of our own civilization. Would he not recognize in New York, for example, a city of vast utilities, to which embellishment is being slowly added, but in piecemeal fashion, with little realization of the great opportunities? He would note the magnificent natural advantages of the harbor, but that its beauty and healthfulness are largely sacrificed and its very utility not fully developed. Scarce any part of the superb water front can be enjoyed by the citizens, either for fresh air or bathing. It is almost entirely monopolized by commerce, and the streets adjacent to the docks are squalid and unsavory and, moreover, inconvenient even for the purposes of business. What untouched possibilities for making this great port of entry to the New World a truly great and grand one and an added source of health and enjoyment to the millions!

For if I did not conceive that the happiness of humanity, of the toilers whose means

of happiness are small, were involved in this question of city embellishment I would not waste another word upon it. It is the union of unselfishness with proper pride, as mentioned above in the case of the individual, that represents the finer phase of this question. In these enlightened days no city can be accounted great that does not recognize its duty toward the millions of workers within its gates; and when I find from the official records that in this district of New York, south of Fifty-ninth street, there are 296,000 children and only ninety-seven acres of open spaces, that is to say, an average of over 3,000 children to each acre, and that acre not entirely available for exercise or always within easy reach of the most crowded parts, I say it is a poor showing for a city which has one of the noblest and most extensive water fronts in the world.

WHAT THE FOREIGN CRITIC SEES IN AMERICA

But to return to the companionship of our foreign critic: He would be struck by the tall office buildings; would have noticed as he sailed into the harbor how impressively they group themselves and rear like bastions against the sky, and would see in them most eloquent testimony to the aspiring energy of the people and to the dignity of their commerce. But as he came to study the subject at close range, he would find that no organic arrangement of the city accompanied these great structures; that they start up here and there, according to no general plan and controlled by no provisions for the benefit of all; that their value often depends upon other similar structures not being erected near them; that they abut on streets from which they exclude the air and sunshine; that these streets are narrow, congested and often foul with dirt; and that the general character of the city belies the dignity and convenience of these office buildings. Further, if he should continue his researches in the uptown residential districts, he would find a Riverside Drive or Central Park of conspicuous beauty; the one a fine example of nature preserved, the other of natural charm made by the landscape gardener. He would find also a considerable variety of very fine residences and other notable buildings, but the apparently endless monotony of the gridironed streets, especially in the apartment house district, would appal him. Have these people no ideas beyond the utilities and conveniences? Yes, they have a Tree Planting Association, which is not as widely supported as it deserves to be, and yet is instrumental in planting about 1,500 trees a year. The barrenness of the streets is being gradually assuaged; but the larger improvement of small squares with grass, trees, flowers, statuary and fountains, such as form oases of refreshment in many European cities, will have to wait apparently for municipal action. In connection with this subject our visitor may have noticed the Plaza, and will have wondered that practically nothing has been done to beautify this grand space at the entrance to the park, bordered by Fifth Avenue and in proximity to several fine hotels. A short time ago there was a scheme to erect at one end of it a soldiers' and sailors' memorial, which was fortunately abandoned. For a site like this will not be properly embellished by the erection of any single object, however handsome, since it calls for a comprehensive scheme of adornment that shall include shade trees and water basins with fountains. It is refreshment to eye and ear, as well as sculptural and architectural beauties, that such spaces should afford, and to this end greenery and the purl of water are indispensable.

A GROWING PUBLIC SENTIMENT

What then is the practical deduction from these considerations? Surely, a public sentiment, as influential and persistent as that which has at last brought the convenience of an underground rapid transit system within measurable distance, should be established and directed towards the beautification of the city. Its aim should be directed first of all to works of great public utility, such as the improvement of the water fronts and the relieving of congestion upon certain streets by boldly cutting new arteries of traffic. Philadelphia is contemplating a boulevard from the City Hall to the entrance of Fairmount Park, and lower New York cries to Heaven for some such relief from the intolerable confusion, delay and inconvenience caused by the condition of its streets. The city has power to condemn property for such a purpose, and it is an old story, quite irrefutable, that such improvements pay for themselves in a few years by reason of the increased values along

the routes. Paris for nearly half a century has been continuously opening up such boulevards, for she realizes that the problem of increased convenience, with the increase of beauty that follows its solution, is a perpetual one; some new phase of it being constantly suggested by the city's progress. Nor is Paris alone in this respect. London some years ago cut through the notorious rookeries of Seven Dials, with Shaftesbury avenue from Charing Cross to Oxford street; immediately lessening the death roll of that district and its yearly sum of crime; effecting thereby a saving on police expenditure, paying for the cost of the work through increased assessments and, when the disbursement is completely wiped out, having this increase of taxes to her annual credit. So thoroughly satisfactory has been the operation that the Council is engaged upon a corresponding scheme from Oxford street to the Strand. London is apparently relying on a New Yorker to improve her underground communications, but in the energetic grasping of the problems above ground can give aces and spades to New York.

BETTER PUBLIC BUILDINGS NEEDED

Another needed improvement that would conduce to dignity, convenience and economy is the erection of municipal offices that would house all the multifarious departments of the city government. Architecturally, the City Hall is a beautiful little building, although its dignity has been impaired by the encroachments upon the park, notably by that most vile erection (architecturally speaking), the general post office. But it is totally inadequate to existing requirements; as also is the ugly range of additional offices behind it. Further accommodation has to be procured in various parts of the city, for which over half a million dollars is paid annually in rental, which capitalized at four per cent. represents an investment of more than twelve million dollars! What would be thought of an individual who pursued such a policy of "penny wise and pound foolish?" In the case of a city, however, since it is the business of everybody, it is the concern of none! Paris has her great central municipal building, the *Hôtel de Ville*, and in each *arrondissement* a *mairie*, which, as the departmental representation of the city's dignity she is adorning, not with spittoons, but with mural paintings.

For the lesson of Paris, and it cannot be too often stated, is that her municipal government is forever improving the conveniences and beauties of the city. We, on the other hand, leave almost everything to private initiation. Not altogether, however, for a notable example in this country of the realization of municipal responsibilities is afforded by Boston, which has been steadily elaborating its park system until it is the most extensive and most variously beautiful of any city in the world. For Boston has always made use of expert assistance to secure beauty; while New York in its speedway consulted only the contractor.

INDIVIDUAL OPINION ORGANIZING

Throughout this article, which most imperfectly and tentatively has merely touched upon certain phases of this most interesting question, New York has been used in illustrations, because it is the city with which the writer is most familiar. But the same problem under different aspects confronts every city in the union, and one of the cheering facts is that every city is realizing it and doing something towards its solution. Municipal art societies are springing up in every direction, which have for their object the beautifying of their respective cities, and they are practically unanimous in the conviction that their proper sphere of action is to lend aid to or to bring influence upon the municipal authorities. They realize that the problem is too vast for individual effort and is only to be solved by the official act of the community. Meanwhile, what is needed is the spreading of this conviction among a continually increasing number of individuals and the establishment, thereby, of a public sentiment, that should be powerful enough to make itself felt.

DIVERSE PROBLEMS WITH A COMMON PURPOSE

A different problem confronts each community. In each there are features to be preserved and some to be improved or removed, and in all the object to be arrived at is twofold—to make the city more adequately express the high ideals of the community and to increase for all, even the poorest of its citizens, the decencies and beauties of life.

THE FIGHT AGAINST TUBERCULOSIS

THE HISTORY OF THE RAVAGES OF THE DISEASE—ITS CAUSES AND METHODS OF CURE—POPULAR MISCONCEPTIONS

BY

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OF the diseases known to man, tuberculosis has been most far-reaching in its devastation. Cholera, plague, yellow fever, and small pox have been more terrible in their ravages but have been periodical only. Leprosy, the only disease comparable with tuberculosis in its damage to the human race, has been practically extinct in civilized countries for at least two centuries. Indeed, the human mind cannot grasp the full significance and scope of tuberculosis in sorrow, suffering and deprivation. Some think it is a modern affliction which has come upon us because of the degenerating influences of civilization. This is not true. Moses knew of it as we know it; he had seen its deplorable work among the Egyptians. Even in that day it was looked upon as a plague. Back of the days of Moses we can trace its bone-strewn path to the Assyrians and we can see shadows of it in the dim vista of the unrecorded past. The truth is that tuberculosis is less prevalent now than at any time within the purview of history. But it is still a monster.

Few know what tuberculosis really is. Even physicians overlook it in some of its forms other than full-fledged consumption. In the latter form the victim has a bad cough, is emaciated and dies from what seems to be starvation. In some forms of the disease the patient dies with acute symptoms pointing to a disease of organs other than the lungs and the death appears on the records under names other than tuberculosis.

The features about tuberculosis which are of greatest interest to the public at large are its contagious nature, its curability and its prevention. Carefully interwoven with these are certain errors which remain to be blotted out of the public mind and intelligence. These errors relate to heredity, incurability and the relationship between cold and consumption.

In order to get a clear idea of what is meant by contagion of tuberculosis, one must first have a clear conception of what contagion means. All diseases which are due to living organisms of any kind whatsoever, are, by the nature of things, communicable from one person to another. The word communicable conveys an abstract idea but tells nothing of the method by which the disease is communicated. Science has demonstrated that different diseases are communicated in different ways and has divided them broadly into two classes, contagious and infectious. A contagious disease is one in which the disease producing organism goes direct from the person having the disease to a person who has not the disease, without passing through an intermediary host or medium. For example, tuberculosis is a contagious disease, because the tubercle bacillus when given off by the person having the disease, lies dormant in the sputa or matter given off, until by chance it finds its way into some other person. The bacillus cannot reproduce itself outside of a host. It must, moreover, be taken in by the host himself, either with food or with air. Malaria, on the other hand, is an infectious disease, because the organism which produces it is taken from a host by the mosquito, reproduces itself in the mosquito and is transmitted by the mosquito to a human being who may never have been in contact with the person by whom the original organism was given off. Briefly stated, a contagious disease requires contact, direct or indirect, between the person who has the disease and the person who is to receive it; whereas an infectious disease does not require

contact, either direct or indirect, between the new and the old host.

Tuberculosis is purely and essentially a contagious disease and the contact necessary for the conveyance of the disease must be intimate and prolonged. Mere casual relationship with a consumptive is practically free from danger. There is no danger of contracting the disease upon the street and very little danger in public places, street cars and railway cars. In none of these places is the exposure long enough to produce an implantation and in most of them the sunlight, air, moisture and trituration produced by the activities of life conspire to destroy the vitality of the organism. For the implantation of the tubercle bacillus and the development of a colony in a new host, it is usually necessary to undergo some such intimate and prolonged exposure as is possible in the home of the consumptive, in his place of business or occupation and in the house which has been occupied by him and has thereby become contaminated, holding, on its walls and floors, for days, weeks, months and years, the living organism.

Tuberculosis has been looked upon until very recenty as an incurable disease and even now is regarded as such by the laity and many in the profession. This is because of the traditions which have come down from the days when the disease was incurable and of the reluctance with which men accept ideas which are contrary to that which has been taught them in their youth. In a measure it is also due to the fact that the disease is seldom recognized until, in its progress, it has passed the curable stage. Under modern methods of treatment, the disease can be cured, almost invariably in the first stage, and can be cured frequently in more advanced stages, To express the curability of tuberculosis in figures, it may be stated that seventy-five per cent. of incipient cases, and forty per cent. of all cases exclusive of the dying ones, can be cured.

The method of treatment by which these results can be accomplished may be briefly summed up as follows: First, proper use of an abundance of easily digested food; second, a proper life in the open air; and, third, such medication as will aid the forces of nature in their battle against the disease. It goes without saying that this method of treatment is within the reach of but few, and that if it is to be accorded to the rank and file, the aid of both the government and of private charity must be invoked to the fullest degree. For the poor and even for the middle class, sanitoria are necessary. Agitation is going on throughout the civilized world for the establishment of such sanitoria and much has already been accomplished in this direction in some of the European countries. In America, the public has not as yet been aroused to a full sense of its duty in this regard. Beginnings have been made, however, and the leaven will spread. Nowhere in the world does an appeal for a worthy charity find a more ready response than here, and it needs no prophet to foretell that when our people understand the subject America will not be a laggard long in the work which means so much to the human family.

So far, but few sanitoria have been established in this country by the Federal and the State governments. Two have been instituted by the United States for its tuberculous marines and soldiers, and one by the State of Massachusetts for people who can contribute in part toward defraying the expenses incurred in their treatment. The State of New York has taken preliminary steps toward founding a sanitorium, and the State of Pennsylvania has encouraged the establishment of such institutions by appropriating money to private corporations for that purpose. Fully half a dozen legislatures have at present under consideration bills for the establishment of sanitoria. The Government of Canada has passed a general law facilitating the establishment of sanitoria by local governments; and, under this law, one successful sanitorium is in operation. All of this is scarcely worthy of being considered a beginning, in view of what remains to be done. We have, in the United States alone, somewhere between one hundred and two hundred thousand cases of incipient tuberculosis. We have an equal number of advanced cases. Nearly all the incipient cases could be cured if sanitorium treatment were available. This number gives some idea of what remains to be done in the establishment of sanitoria. But, besides making provision for the incipient cases, there is the task of providing proper treatment for cases which have advanced beyond the incipient stage, many of whom

have passed beyond the threshold of hope, but some of whom might yet be cured if the proper help could be extended to them. For such cases institutions of two kinds are necessary. For the hopeless cases, special hospitals should be erected in cities and towns; general hospitals, quite properly, do not care to take such cases and, indeed, are not equipped for their treatment. Dying consumptives, during the last two or three months of their lives, need nursing, special diet, and above all, the kind, sympathetic care which can be given only in an institution equipped for that purpose. Persons who, having passed the incipient stage, have a just hope left remaining, should be placed in a hospital near some large city, built specially for the purpose of treating tuberculosis. Here again the equipment of a general hospital falls short; for good and sufficient reasons, general hospitals decline to accept such cases. Moreover, the treatment of such cases requires expert knowledge which can best be had in large cities.

The prevention of tuberculosis opens up the most interesting and enticing field of labor for the philanthropists that has ever fallen to the lot of man. To be able to stamp out a disease which has brought so much unhappiness to the human race, which has blighted so many hopes, which has deprived the world of so much that is good and beautiful, is a privilege almost beyond the ambition of a human being; and yet, the accomplishment of such a work is within the power of the rising generation. That tuberculosis can be stamped out no longer permits of doubt. Leprosy was stamped out by empirical methods and without the aid of science. Tuberculosis can be eradicated more easily, because science has given us knowledge of the life history of the organism which produces the disease, thereby enabling us to know just what to do..

Were the means at hand to place every case of tuberculosis either in a sanitorium or in a hospital the disease could be stamped out in a few years. It is plain enough that, for every case of incipient tuberculosis that is placed in a sanitorium, at least one new case must be prevented, because the disease, in the incipient stage, is not contagious; and the case being removed from where contact with it can take place before contagion sets in, no contagion can ensue. When cases which have advanced to the breaking-down or contagious stage are removed into hospitals or sanitoria, prevention of contact is brought about only from the time of such removal; but, as the most dangerous time in the life of the consumptive is during the latter part of the disease when he expectorates freely, is confined to the house, and is too weak to observe habits of cleanliness, removal to a hospital where sanitary measures can be enforced will accomplish, at this stage, a great deal in preventing the spread of the disease. It would, moreover, in some degree, prevent the contamination of rooms and buildings—a prolific source of contagion.

It goes without saying that sanitoria and hospitals for all cases of tuberculosis cannot be established at once, and that the founding of institutions with capacity for even a fair proportion of the cases which exist will take years. In this light, the task of stamping out tuberculosis, at first glance, looks like a hopeless undertaking. But it is not. It must be borne in mind, in this connection, that every case which is prevented, has a progressive value in the scheme of prevention for all time to come; not only is that case prevented, but, likewise, all cases which might have grown out of it. Besides, much can be accomplished by other preventive measures. Boards of Health can do a great deal. Every case of tuberculosis in the land can be made harmless, at least, theoretically speaking: but here again comes in the question of practicability. The contagion of tuberculosis lies in the sputum, or matter given off. It exists nowhere else. This sputum, or matter, is visible and tangible. It can easily be sterilized, therefore, immediately upon being given off. When this is done, no harm can come to those who are intimately associated with the person giving it off. If Boards of Health were cognizant of the whereabouts of every case of tuberculosis in their respective communities, and would give individual instruction, with brief supervision, to every case in methods of sterilizing the *contagium*, successful prevention could be instituted with many cases—practically with all cases except the depraved and the vicious. Registration of tuberculosis is, therefore, the first step necessary in an intelligent scheme to stamp out the disease. A hue and cry has been raised against registration. Intelli-

gent physicians in high standing have spoken and have written against it. Why? Wholly because of misunderstanding and false sentiment. The methods in vogue, of quarantining against diseases which are registered, are so heartless, so obsolete and so useless that many conscientious, experienced physicians feel in duty bound to place themselves as barriers to any further inroads upon the sacred rights and liberties of the individual by the majesty of the law.

It is a pity that our legal machinery for caring for the public health has been so badly planned and built and, by its operation, has lost the moral support of the profession upon which it must chiefly rely for assistance. But no one will gainsay the proposition that the shortcomings of Boards of Health, as constituted and managed, do not give a good and sufficient reason for opposition to a measure which has for its object the saving of human life, and is reasonably certain of accomplishing that object. Besides, in the nature of things, the quarantining methods which prevail for diseases now registered have no place in a scheme for the prevention of tuberculosis. What object could there be in restricting the liberties of a consumptive, when by proper instruction and training he can be made harmless?

Here comes in the most plausible argument of the opponents of registration. Why have registration, if the consumptive can be made innocuous so easily; why not leave it to the attending physician to instruct and train him? The answer to this argument is, that in a very large proportion of advanced cases, no physician is called in until a few days before death; and, in those cases in which there is a physician in attendance he, as a rule, fails to give the instruction and training requisite for successful prevention.

It is to be regretted that much of the energy which, so far, has been let loose and that much of the money which has been expended for the prevention of tuberculosis have been turned into wrong channels. Expensive Government departments have been created and millions of dollars have been expended in attempts to prevent the domestic cow from giving tuberculosis to human beings, although it has been well-known for years, in the medical profession at least, that the testimony upon which the cow has been convicted of giving tuberculosis to human beings was inadequate. At best, the case against the cow has been a negative one. She has tuberculosis and man has tuberculosis. She has never been able to prove that she does not give the disease to man; and, as man eats her flesh and drinks her milk, it is quite clear that he must get the disease from her. The fact that it has been proved that man gives the disease to her is quite naturally used against her, because, by analogy, if man can give the disease to her, she must be able to give it to man. Clinically, there is no evidence against her. The first indisputable case in which tuberculosis in a human being has been contracted by the use of milk or meat is yet to be placed on record. A few cases have been recorded in which milk seems to have been the source of origin of the disease; but all of them are open to the criticism—so far, at least, as the record goes—that contagion from human beings could not be excluded.

It would be presumptuous to say that tuberculosis *cannot* be conveyed from animals to human beings; because what appear to be authentic cases of accidental inoculation of human beings with animal tuberculosis are on record. But it can be said safely that, practically, tuberculosis is seldom, if ever, given to human beings by the use of the milk and the meat of the cow as food.

Of the popular errors about tuberculosis which merit consideration, heredity stands first. The world has looked upon tuberculosis as an hereditary disease for so long a time, and the literature of the world—and, indeed, all human thought and habits of life —are so permeated with the idea, that it is difficult for the average person to take up other views upon the subject and to mould his thoughts and shape his conduct accordingly. We can now easily understand why our forefathers were misled. Tuberculosis being an insidiously contagious disease, long in incubation and slow of development, quite naturally spread along the lines of family relationship, and proceeded along those lines until the family became extinct or until immunity had been established. It was the slowness of the disease and the long period of intervention between cases that misled. With our knowledge of the life history of the tubercle-bacillus and of the solid requisite for its implantation and cultivation, the stum-

bling-blocks of our forefathers resolve themselves into thin air. The strong argument for heredity which was forged out of the extinction of whole families by the disease, the overleaping of generations with reappearance of the disease in members of the family resembling ancestors who had had the disease, and death by the disease in different members of a family at the same age, gives place in the new light to a stronger argument for contagion forged out of the same material.

The extent to which heredity really affects tuberculosis is limited within the confines of predisposition on the one side, and immunity on the other. There is a fundamental law governing all living organisms, by which a certain, definite soil is required for development and propagation, the soil being governed by the influences of environment, and showing a tendency and disposition to wear out. This law is illustrated in the wheat-field. The farmer knows that unless he has a proper soil his wheat will not grow and fructify, and that, even when he has a proper soil, there is a limit to the number of consecutive crops which he can raise from it. When the soil is exhausted, he can restore it by adding certain ingredients and allowing it to lie fallow for a time, but if he exhaust it beyond a certain point, it is difficult to restore it to a condition which will permit him again to grow wheat. Originally, the whole human race was probably good soil for the tubercle bacillus. This soil was transmissible from parent to offspring, and constitutes predisposition to the disease. In races and families in whom, with occasional intermissions covering perhaps centuries, successive generations have harbored the tubercle bacillus, a certain racial and family immunity has ensued, and they are no longer as prone to the disease as other races and families. Not only is this view in harmony with the laws of biology, but it is corroborated by the history of tuberculosis when looked at from a broad point of view. The people who have longest been exposed to tuberculosis are at present least susceptible to it; and the people who have been exposed most recently are now most susceptible to it, and develop it in the most malignant form. For example, the white race, which has struggled against tuberculosis for thousands of years, is much more immune than the colored race of Africa and the American Indian, who have been in contact with the disease for but a few centuries. The colored people of America, moreover, are more immune than the colored people of the interior of Africa. While the former have been exposed to the disease for at least two centuries, the latter only recently have been brought in contact with it. Historical outcroppings upon the subject of tuberculosis give the impression that the white race was at one time as susceptible to the disease as the colored people and the American Indians are now. Three centuries ago nearly one-half of all Englishmen died of tuberculosis.

Another error about tuberculosis which is ingrained in the popular mind is that tuberculosis is the result of a neglected cold. There is no causative relationship between what is ordinarily termed a cold and consumption, nor between temperature and consumption. A cold, in the popular sense of the word, is an inflammation of the mucous membrane of the respiratory tract, especially the upper air passages, and is always a germ disease. The organism which produces it is as different from the tubercle bacillus, however, as wheat is from rye, and is just as incapable of producing tuberculosis as a grain of wheat is incapable of producing a stalk of rye. A cold may stimulate tuberculosis into greater activity, and frequently sets up the symptoms which lead to the discovery of the existence of tuberculosis. This no doubt accounts for the association in the popular mind of colds with tuberculosis. Temperature changes can produce neither colds nor tuberculosis. They may influence the progress of both by depressing the resisting power of the individual and thereby predisposing him to the disease. A high temperature will do this as effectually as a low one. As a rule, tuberculosis runs a more malignant course in warm climates than in cold ones. There is this retarding influence over the spread of the disease in warm climates, however, which does not exist in cold ones: people live out of doors more and shut themselves up less in ill-ventilated rooms. The prevailing erroneous ideas about the relationship between colds and consumption and between temperature changes and consumption are an impediment to preventive measures and proper treatment.

The replacing of error with truth in the public mind is the all-important step toward the extermination of the disease.

THE WORK OF THE BOOK WORLD

NOVEL-WRITING AS AN INDUSTRY

THERE have been more than 200 new novels published in the United States this fall. There have been perhaps five thousand written that the publishers have declined. There is no doubt that there has been a great "over-production." The book stores are so crowded with them that they bewilder the book-buyer and give the bookseller much trouble. But the public that finds fault with the publishers for bringing out so many novels ought at least to give them credit for the greater number that they decline.

The phenomenal popular success of a few writers of fiction during the last few years—some masters of their craft and some mere stage carpenters who set up spectacular scenes—has had the effect of making novel-writing appear to be an industry. Few persons used to make it a business; for regarded as an industry it did not pay for the labor it required. But now it is regarded by many as a way to fortune. Lonely women, disappointed teachers, impecunious preachers—these, but not these only, try their hands at it. You never know whom to suspect. Your physician, even your broker, men in public life, ladies in society—your own grandmother or your own granddaughter for all you know—all these have taken to the secret practice of the craft. For instance, one publishing house, which does not publish many novels, has within a given period received eight hundred volunteered book manuscripts, of which six hundred and fifty were novels. Of these four were accepted for publication. A few such facts as these indicate the extent of the delusion about the profits of the industry. "Father," said a boy of fourteen the other day, "I want you to buy me a copy of the 'Century War-Book.' I'm going to write a novel of the Civil War."

It is easy to ridicule persons who thus waste their time and energy. But the ludicrous fact is that most persons who write ridicule in the literary journals have themselves tried their hands at some sort of story unsuccessfully; for the critic is perhaps the only person that is dead sure to fail. But the pathetic aspects of the industry press themselves on every "reader" and publisher. The reading of hundreds of hopeless stories, and the correspondence with their authors reveal an appalling world of disappointment. Every manuscript brings with it the hope of fame and fortune, and after a long period of hard labor the author, however skeptical he may have at first been of his story, has persuaded himself, by the time it is finished, that it is a piece of good work.

A novel-maker works under peculiar and in some ways unfortunate conditions. He works alone. Most men and women, at least while they are writing their first novels, take nobody into their confidence. A lonely worker at any task misses the corrective and balancing influence of companionship. If he runs off the main track of his work and becomes fascinated with some mere side-excursion, there is no influence to show him the main road again. There is not the cheer of fellow-workers. There is not the exchange of notions about methods and materials that persons who work at other crafts have. Worse yet, the material of which most novels are made is imaginary. The writer spins it out of himself. He misses, therefore, in a peculiar way the effect that sunshine and ventilation have on natural products of every kind. There is a tendency to become morbid about anything that one does wholly by one's self. And while this morbid tendency has its effect on the work it has a still stronger effect on the worker. He finishes his task with the conviction that he has done it much better than he has.

Nobody ought to write a novel in secret. The imagination needs the corrective influence of a friendly companion. In doing a constructive piece of work every builder needs to see it once in a while through other eyes than his own. I know two instructive instances of successful story-writers. One wrote her first novel without informing any one that she was doing such a thing. Nobody suspected it. Nobody read it or heard of it before it was sent to the publisher. It

was accepted and it was the beginning of a successful career. But when she came to write the next novel, a kinsman was taken into her confidence at every step. Whether the kinsman's critical help was great or small his social and psychological help was great. She had companionship in her work. She no longer did it as a secret indulgence. The second novel was a great deal better than the first in its construction and in its cheerful attitude to life. Another successful novelist has always had her sister as a companion in her work. They talk over the people of the book as if the characters were real; and they do become very real to them, and therefore real to the reader at last.

Nobody ought to give time to writing novels who is unwilling frankly to avow it and to give the best hours of the day to the work, and the best days of the week and the best weeks of the year. In other words novel-writing as an industry is not worth doing—it is not worth trying. Once in a while a hack or a novice makes a popular success. Once in a while, too, somebody finds a box of gold under an old house. One event is almost as frequent as the other. The only persons who make careers as producers of fiction are those who take up the work with earnestness and as the work of a lifetime. It is not an industry, it is an art, with such writers as Mr. Crawford, Mr. Cable, Mr. Churchill, Miss Wilkins, Miss Glasgow, Miss Johnston, Mr. Norris, Mr. Gilbert Parker—with all who succeed. Everyone meets with a different degree of artistic and popular success; but they all have this in common—that they do their best, that they work hard; and they earn all they win in renown and in fortune—earn it twice or thrice. Nobody can take up such an art as an incident in his life and win a permanent success.

Most of the labor that novices and lonely persons give to attempts at fiction is a pathetic waste of time. The same time and energy given to some other work would yield at least some results. And there are other books that the world wants more than it wants novels—histories, biographies, social studies, adventures. These seldom yield sudden fortunes. But there have been men who have made very considerable incomes as historians and biographers. Their incomes have often come to their children as to themselves; but almost every important historical work has brought a fair reward at last. And to undertake fiction as a means of making money is a foolish enterprise at best. The real novelist does not consider the pecuniary result, except incidentally; and the man or the woman who starts out saying, "I will write a novel and make money," has perhaps never succeeded. As a gainful industry novel-writing is not worth the labor it costs. As an art it is one of the noblest and most difficult; and only those who regard it as a great art have any right to undertake it.

TWO NOVELISTS WITH LARGE PLANS

TWO of the young American men of letters who take their work seriously and are giving their lives to the production of novels of American life in the true spirit of high endeavor, are Mr. Winston Churchill and Mr. Frank Norris, who have laid far-reaching plans. Mr. Norris's "Octopus" is the first of a trilogy of novels that have to do with the story of the wheat—a large economic theme, full of human interest; and Mr. Churchill is at work on a series of novels of American history of which "Richard Carvel" and "The Crisis" are parts.

"ALASKA": A GREAT WORK ON A GREAT SUBJECT

By Dr. W J McGee, of the Smithsonian Institute

COMMONLY, the passage from an old century to a new tempts retrospect; but here is a century-milestone tempting prospect—a work on our greatest Territory, produced by coöperation between one of our greatest capitalists and several of our greatest scientists.* In the first place, the book marks a stage in the gradual transition of literature from the primarily idealistic to the essentially realistic, a transition itself but a chapter in the long passage from the hazy dreaminess of times primeval to the clear incisiveness of modern thought; yet it retains all the charm lent to the former by skillful word-painting,

*"Alaska." New York, Doubleday, Page & Co., 1901 (published under the superscript; Harriman Alaska Expedition, with coöperation of the Washington Academy of Sciences). Vol. I, Narrative, Glaciers, Natives, by John Burroughs, John Muir, and George Bird Grinnell; Vol. II, History, Geography, Resources, by William H. Dall, Charles Keeler, Henry Gannett, William H. Brewer, C. Hart Merriam, George Bird Grinnell, and M. L. Washburn. pp. i–xxxix and 1–383, with 39 colored plates, 85 photogravure plates, 5 maps, and 240 text figures. Edited by Dr. C. H. Merriam.

artistic picturing, and attractive book-making. In the second place, the work (in field and sanctum and press-room) represents a combination of capital, intellectual and financial, for which it would be hard to find a precedent, and which can only be interpreted as a pleasing sign of the present and a gratifying promise for the future.

The history of the work is unique. Mr. Edward H. Harriman planned a trip to Alaska, primarily for recreation, secondarily for instruction for his family, and doubtless with an intuitive (but unwritten) hunger for first-hand knowledge concerning the vast Territory destined to play an important rôle in national development during the new century. That the recreation might be free and safe, a commodious vessel was chartered; and that the instruction might be full and trustworthy, the spare space aboard was filled with guests famed for special knowledge. The author of the best earlier book on Alaska; the leading geographer of America; one of the two or three foremost geologists of the world; the first American authority on the distribution of animal life; the most appreciative living student of living glaciers; an eminent authority on the aborigines; America's most graceful litterateur-naturalist—these were among the two-score guests on the *George W. Elder* in her two months' trip along the coasts and about the insular extensions of Alaska during the summer of 1899. With such a corps of specialist preceptors, the desired instruction necessarily flowed in full measure, and the incessant questions arising in active minds journeying through new lands found ready answer. Yet the instructors themselves were no less avid of knowledge than host and hostess, and during most of the trip proved the real learners —learners from the final preceptress of all men alike, Nature. This, indeed, was the consideration which the scientists were unable to resist, the opportunity of extending investigation into new fields and along new lines. Thus the pleasure trip became an expedition of research; and the additions to knowledge resulting therefrom, together with the best general descriptions of the Territory ever written, are incorporated in the two sumptuous volumes just issued.

Following a Preface (by Mr. Harriman), an Introduction (by the editor, Dr. C. Hart Merriam), and other preliminary matter, comes a bit of the realistic literature giving character to the book, a "Narrative of the Expedition," written by John Burroughs in his best vein. True, the horizon fixed in the east was stretched by the vast vistas of the plains, distorted by the towering Rockies, and strained again to fit majestic mountains and mighty glaciers, as the party swept across country and along shore; but no better thought-bridge between Eastern shores and Western has ever been constructed for those who occupy one extremity and wish to picture the other at second-hand. A problem felt by every writer and speaker on the West, when addressing an audience in the East, is: How may mountain and plain, canyon and crest, glacier and volcano, and all other things typical, be made *real* in the mind's-eye? and it is this problem which the litterateur-naturalist has solved so skilfully. "As one goes West nature is more and more and man less and less"; so John Burroughs begins —and the key-note is followed harmoniously to the contentful conclusion, "We had gone far and fared well." Next follows "Notes on the Pacific Coast Glaciers," by the rugged mountaineer and ice-lover, John Muir; and his verbal descriptions are no less vivid than the superb photogravures in which half the story is told. "The Natives of the Alaska Coast Region," by George Bird Grinnell (known no less for his Indian researches than as editor of *Forest and Stream*), completes the first volume, and forms a noteworthy contribution to knowledge of the first land-holders in northwestern America.

The second volume is opened by an account of "The Discovery and Exploration of Alaska," by Dr. William Healey Dall, who began a scientific career in the ill-fated Transcontinental Telegraph Expedition of 1865-7, and who remains the leading authority on the geography and resources of the Territory. Naturally, his chapter is the best epitome of Alaskan history extant. Then follow "Days Among Alaskan Birds," by Director Charles A. Keeler, of the California Museum of Sciences; "The Forests of Alaska," by Professor Bernhard E. Fernow, of Cornell; and "The Geography of Alaska," by Henry Gannett, Geographer of the United States Geological Survey and three censuses. And it must be noted, in passing, that this is geography up to date, the geography which deals with forces as well as forms, with rivers as

agents and valleys as products, with mountain and plain as paragraphs writ on the rocky pages of Earth's own record of her own making. The surface description is the best and latest, resting, as it does, on all surveys in the Territory by every governmental institution and large corporation up to the century's end. "The Atmosphere of Alaska" is luminously discussed by Professor William H. Brewer, of Yale, who explains the peculiar effects of light and color so impressive along the Alaskan coast as well as in the interior, effects developing into those tricks of mirage that have deceived untrained tourists and tinctured many a traveler's tale of marvelous things (enchanted cities and the like) amid the Alaskan mountains. "Bogoslof, Our Newest Volcano," is fully described by Dr. C. Hart Merriam, Chief of the Biological survey; and his account, drawn from definite records as well as personal observations, yields a clear view of that class of earth-making processes headed (so far as history goes) by Krakatoa. "The Salmon Industry," by Dr. Grinnell, and "Fox Farming," by M. L. Washburn, treat of novel industries already coming into prominence by reason of the peculiar geographic conditions of our remote Territory, other industries being touched upon in some of the earlier pages.

The literary quality of the work is attested by such names as those of Burroughs and Muir and Grinnell, as well as by the editorship of Merriam, one of America's most pleasing writers of science; and it is borne out by the initial sonnet, in which Keeler sums up "Alaska" in a single stroke of poetry, and the final poem by Dall, who sings "The Song of the Innuit" in full sympathy with their own inner life and esoteric tradition. In artistic quality the book is beyond reproach, if not beyond compare; the colored plates—views of glacier and mountain, of bird and mammal (including the Kadiak bear and Kadiak fox, never before adequately illustrated), of the brilliant foliage and flower of the short Alaskan summer, etc.—are unexcelled in delicacy and in that absolute fidelity which the nature-student demands; the photogravures are admirable, while many of the numerous pen sketches introduced in the text are gems in design and execution.

A SHORT GUIDE TO NEW BOOKS

The Cavalier

GEORGE W. CABLE'S new story is a notable book; swift and strong as the rush of cavalry squadrons. The breath of life is in the book and the elevation of a noble spirit, the shock of war and the passionate thrill of innocent love. The story recounts the fortunes of Richard Thorndyke Smith, a Confederate scout—though hardly more than a boy—who is a Southern gentleman of the finest temper. On a secret expedition he is saved from death by a woman. Discovering that beside her "starry charms" this Charlotte Oliver has the qualities of an exquisite womanhood, the young soldier even subordinates his own love for a most delightful young damsel to further the love affair of Charlotte and his captain, Ned Ferry. The captain is really the "cavalier," a splendid hard-riding, close-fighting Bayard, who finally wins his lady after showing his mettle in several stirring fights. No reader can afford to miss the story. It is ability to write such terse, uplifting, fascinating literature as this that gives Mr. Cable an assured place in American letters. Vigorous illustrations by Howard Chandler Christy enhance the volume. (Scribner. $1.50.)

The Tory Lover

SARAH ORNE JEWETT has entered the field of historical fiction to beautiful purpose and effect. The story opens in the old town of Berwick, Me. Mistress Mary Hamilton induces John Paul Jones to accept the service of young Roger Wallingford. Both Jones and Wallingford are in love with Mary Hamilton, and Jones doubts Wallingford's loyalty to the American cause. But in the *Ranger's* attack on Whitehaven in England, young Wallingford is captured by the English and is put in the attitude of a traitor. Mary Hamilton goes to England, now become sure of her love for Wallingford. The tangle is straightened out and Wallingford's loyalty made plain. The story is a well-constructed piece of work; more, it has Miss Jewett's admirable style and her keen and animating sympathy. It is an historical story that is a piece of literature. (Houghton, Mifflin. $1.50.)

New Canterbury Tales

Exquisite choice of diction, suppleness of phrase, unstinting fecundity, a crisp and nervous manner, all these make MAURICE HEWLETT's style a joy. Here with subtle charm, the author of "The Forest Lovers," relates a handful of tales recounted by a group of Canterbury pilgrims—Chaucer and yet not Chaucer at all: what seems quaint in the old poet is replaced by a fantastic wit that is nothing if not modern. Idyllic romance is the keynote of the stories, but levity is not wanting. The last tale, for example, a mediæval comedy, has a vein of delicate foolery that is indubitable art. All have dramatic intensity; all are constructed with scrupulous finish; as a whole, they add distinctly to the writer's laurels. (Macmillan. $1.50.)

Magic and Religion

ANDREW LANG has done here a valuable piece of critical work. The bulk of the book—composed of essays attacking Tylor's theory of loan-gods and Frazer's theories of the origin of religions, as expounded in the "Golden Bough"—is a contribution of no small moment to the nascent science of religion. Mainly Mr. Lang concerns himself with Frazer's theory of the origin of the Christian faith. A masterly dialectician, he becomes here a sort of "Devil's Advocate." Often there is more quick glinting of his logical rapier than businesslike lunging, but the sum total of his efforts is a definite advance toward truth—truth, however, that is yet pathetically far away. Without "The Golden Bough" the book is hardly significant, but, conversely, no longer is "The Golden Bough" significant without Mr. Lang's objections. No man who wishes to reason clearly on the origins of faith can afford to be ignorant of the rich material the volume contains. (Longmans. $3.50 net.)

A Modern Antæus

Whoever may be the mysterious author of "An Englishwoman's Love Letters" it is evident from this novel that he (or she) is to be reckoned with. In originality of conception, in handling and character drawing, the story is so remarkable and so distinguished as to increase the wonder concerning the identity of its writer. It is a story of character, following almost from birth to death through some 600 pages the fortunes of Tristram Gavney, child of nature. He passes through the evolution of a veritable savage. The secrets of nature are his: he hears the sap flowing in the trees; he discovers water with a divining rod; he draws comfort in distress from physical contact with the earth. The plot is comparatively slight, but this central figure carries the reader's interest with him as an intimate friend does in real life. It is a volume that must attract attention on far more valid grounds than those which were responsible for the widespread popularity of "An Englishwoman's Love Letters." (Doubleday, Page. $1.50 net.)

D'ri and I

IRVING BACHELLER has turned, like others, from rural realism to historical romance. All his incidents are from the life of Northern farmer-warriors in the War of 1812. So rapidly do these follow that it is hard to catch breath between one peril of the two heroes and the next. Yet so vague are the minor characters, so monotonous grows the clashing of swords and the beating of hoofs, that the story does not hold the reader's interest. D'ri, a quaint, brave, far-seeing man, is the only character that is a creation, and he is an echo of Eben Holden. (Lothrop. $1.50.)

Cardigan

In ROBERT W. CHAMBERS' latest book the stirring action frames a sweet and delicate love tale. Cardigan, made cornet of British cavalry just before the Revolution, soon swings from "God save the King" to "God save our country." His love for his childhood playmate deepens into an ideal passion; his Irish wit and dauntless bravery bring him such diverse friends as Highwayman Jack Mount and Patrick Henry. Never a swashbuckler, he remains a brave, boyish gentleman. Mr. Chambers has grown remarkably. The whole book lives; barring an overdone villain, the people are flesh and blood. Every page possesses charm and grace, and the last chapters have so sweet a scent of wild country, so strong an uplift of brave hearts, and so holy a calm of tender, lasting loves that they will be hard to forget. (Harper. $1.50.)

The Education of the American Citizen

ARTHUR TWINING HADLEY, President of Yale, discusses in these essays and addresses living problems in politics and education; distinctly adding to the intelligent thought of the hour. He views public questions a little academically, but breadth of view and catholicity of spirit mark all his utterances. In treating educational topics his emphasis on the principle that colleges should train for citizenship rather than for scholarship is right-minded and inspiring. The book is full of matured and seasoned thought—not to be lightly disregarded. (Scribner. $1.50.)

The Right of Way

Mr. GILBERT PARKER has written a book which will be re-read with increasing pleasure. Charley Steele, a fop, a clever, heartless, atheistic roué is, one night, supposedly killed by the lumbermen he has angered by attention to a barmaid. His old world goes on without him, while he, rescued and carried to a little town far away, struggles and grows until

he becomes a true hero. He is the story, and all the living people who surround him are important only in their influence upon him. It is a study in the making of a man, of transformation, redemption, and, the reader trusts, salvation. Never in the remoulding of this remarkable character does the artist's pen slip, though sometimes with the rest the colors are too lurid, the setting too melodramatic. In some instances the work is conscious, but only for the moment. In the main, it is a consistent, well-rounded stirring effort. Charley Steele will live. (Harper. $1,50.)

Blennerhassett

Mr. Charles Felton Pidgin's book, which he heralded in "Quincy Adams Sawyer," is a chronicle which would teach that Aaron Burr was a man to be honored and Alexander Hamilton one to be despised. It is written after the manner of a history and is called a novel. It falls short of being a history because it is untrue. It falls short of being a novel because it is uninteresting, if for no other reason. Its commercial value, if it has any, will come from its sensationally unique view of two historical characters. (Clark. $1.50.)

Tristram of Blent

Anthony Hope's new novel is more ambitious and less successful than some of his earlier works. Throughout there is charm of manner, but the first half of the book is disappointingly meagre, and in the second half where the story assumes headway there is not the superabundant vitality that George Meredith has taught us to look for in this type of novel. Harry Tristram, believing himself illegitimate, plots to retain the family estates, but in a burst of amorous generosity renounces them in favor of a poor but lovely cousin, Cecily. His experiences in the world make him a man; meanwhile Cecily at Blent finds herself in love with him. Later, amid complications, they marry. Not a very thrilling narrative, not a very incisive bit of character analysis, Tristram is a readable story of some literary merit. (McClure, Phillips. $1.50.)

Freshman English and Theme-Correcting in Harvard College

The teachers of English in the schools and colleges of the West, not to speak of many in the East, owe much to the writers of this novel little book, C. T. Copeland and H. M. Rideout, instructors in Harvard College. Lucidly and succinctly the writers set forth in detail the methods employed in teaching English to Harvard freshmen. In too many educational institutions antiquated methods still keep their vogue. With a book like this at hand there is no excuse for retaining them. The volume is to be highly commended; there are few teachers of English who cannot gain a hint or two from its closely packed pages. An excellent feature is a series of facsimile freshman themes with the instructor's comments. (Silver, Burdett & Co. $1.00.)

A Lily of France

Mrs. Caroline A. Mason writes a very interesting story of life in France in the sixteenth century, during the terrible persecution of the Huguenots and Spain's attempt to crush the Netherlands. Charlotte of Bourbon is the "Lily of France," whose childhood's hero, young William of Orange, she later marries. With charming pictures of home life in Holland and of life in the old French abbey, with careful delineation of the characters of the priests of the old and the preachers of the new religion, and with many incidents and adventures skilfully woven in, we have a charming, well-written tale, worthy of a hearty welcome. (The Griffith & Rowland Press. $1.50.)

The Nineteenth Century: An Utopian Retrospect

Mr. Havelock Ellis has written a conversation between a student and an archæologist of a far future time, in which they discuss the sordid and bloody characteristics of the nineteenth century, especially the brutal "civilization" of the English; for in the nineteenth century the English, as well as other nations, still clung to the barbaric notion of nationality, and the supplying of man's physical needs had not yet become automatic. It is a sermon that is readable because it is short, but not particularly interesting because it lacks humor. (Small, Maynard. $1.50.)

The Striking Hours

These little tragedies of Northern Dartmoor have the atmosphere and dialect already made familiar by other tales of Eden Phillpotts. They have, too, unfailing pathos. Not to be compared in power with the writer's longer stories, his novels, they yet touch with imaginative color the lives of simple Devon villagers, a pugilistic blacksmith, for instance, or a lovelorn bellringer, and make them of moving human interest. (Stokes. $1.50.)

Life Everlasting

A sad and grateful interest is awakened in this last book from John Fiske—a little book in the series of philosophical religious discourses that includes "The Destiny of Man," "The Idea of God," and "Through Nature to God." He reviews the evolution of the faith in personal immortality, upon which, he maintains, science throws no light. Science, however, certainly gives no sufficient reason to reject it. It remains undemonstrable, but it is not, therefore, to be despaired of. His faith takes a leap from the place where his philosophy ends. (Houghton, Mifflin. $1.00.)

The Mills of God

In this novel of ELINOR MACARTNEY LANE (time a hundred years ago) the beautiful illegitimate daughter of the Prince of Wales marries in Virginia an elderly Englishman. Yielding later to a fascinating young rake, she sees her son grow up a lawless man, while the lover, father of the boy, grows weary of her. Father and son fall in love with the same girl—who prefers the father. The son stabs the girl and himself: he dies; she lives and marries the father. The heroine barely survives her lover's disloyalty and her son's death. The plot moves fast, the scenes are dramatic, the dialogue lively. (Appleton. $1.50.)

A Short History of the American Revolution

Mr. EVERETT T. TOMLINSON, who has instructively made himself at home in the period of the Revolution and has written the most interesting historical books for boys that we have, has turned his story-telling skill and his historical knowledge to a more directly instructive use. In this one-volume history he makes all the larger movements of the Revolution plain and many dramatic. It is a better proportioned book than most of the New England narratives of the war. It contains many portraits and reproductions of old prints, and is the most interesting first book on the subject for readers of all ages. (Doubleday, Page. $2.00 net.)

The Eternal City

HALL CAINE has produced a very long book with an utterly improbable plot, unthinkable characters, and a style, if it may be called a style, distressingly flaccid. One cannot take the production seriously. It does not require a high degree of narrative power to make a story credible, and even that "The Eternal City" is not. Mr. Caine demands much of his admirers when he hurls at them six hundred pages of such stuff as this. (Appleton. $1.50.)

Footing It in Franconia

After his wonted manner, BRADFORD TORREY rambles entertainingly along, discoursing on the birds and flowers and the joy of existence in Franconia, New Hampshire. The naturalist and the bird-lover will delight in the book, and other readers, more especially those who are lucky enough to know "Francony," will find in it open air, sunshine and a pleasant companion. (Houghton, Mifflin. $1.10.)

The Westerners

Bret Harte, Hamlin Garland, and a college sophomore collaborating might match this dashing narrative by STEWART EDWARD WHITE. With occasional lapses into crude stiffness the story careers along through fights and massacres, mining ventures, villainy unspeakable, to the death of the villain and the marriage of the heroine. It is bold, breezy, at times thrilling, always infused with virile Western spirit, but raw. Mr. White has splashed his reds, and yellows, and blacks too freely. Yet "The Westerners" is a strong story. (McClure, Phillips. $1.50.)

The History of Sir Richard Calmady

We have here a novel by Charles Kingsley's daughter—LUCAS MALET—written with a fearlessness quite worthy of her father. It is the story of a young English gentleman deformed from birth and a profound study of his noble mother; the young man develops through misfortune to his highest possibilities. English country life is charmingly depicted, and, although the author writes without humor, the seven hundred pages do not seem long. The book displays a richness of experience and a keen insight into life without obtruding its psychological purpose. It is one of the more important among recent books. (Dodd, Mead. $1.50.)

Circumstance

S. WEIR MITCHELL tells here a Philadelphia story mainly concerned with the intrigues of an unscrupulous Spanish beauty who wrecks one life and threatens others. Mrs. Hunter, the adventuress, is not a pleasant mental associate, but she is so distinctly drawn that she cannot be easily forgotten. She is last seen coming from a continental gambling house with the defeat of her purpose in life—to secure plenty of cigarettes and a luxurious competence—stamped on her pale face and drawn lips. Lacking in sunniness, in a way throwing a sop to morbidity, the book is not lacking in power. (Century. $1.50.)

Talks on Writing English—Second Series

ARLO BATES' "Talks on Writing English—First Series" deserves to stand with Wendell's "English Composition" among the few really profitable books designed to teach students and others how to write. This more advanced treatment of the same subject is like the earlier work, but a little thin. With a fuller discussion than usual of the subtler details of technique, and with some excellent illustrations, Professor Bates again goes over familiar ground; his really new material could have been presented much more briefly. Withal the "Talks" are suggestive. (Houghton, Mifflin. $1.50.)

The Century Book for Mothers

Written by LEROY MILTON YALE, M.D., formerly Lecturer on the Diseases of Children at Bellevue Hospital Medical College, and GUSTAV POLLAK, Editor of *Babyhood*, this book gives instruction to mothers and nurses regarding the rearing of children. The first half of the book discusses fully such sub-

jects as "Preparation for Motherhood," "The Nursery," "Dress and Clothing," "Food and Feeding," and so on. Part II is a series of questions and answers, already published in *Babyhood.* Though many of the answers are filled with prolix erudition with very little kernel, some at least may be helpful. The volume is a sound and durable bit of book-making. (Century, $2.00 net.)

Stephen Calinari

Not without distinction, though not wholly satisfying, is this novel by JULIAN STURGIS. It is a psychological study—the story of an egotistical Oxford undergraduate, who flings up his college career to enter political life, whisks into love and quickly out again, rushes off to the Balkans to report a war, and there is so chastened by the tragical death of his father that he returns to England cured of his whimsies. Again he falls in love, but this time sincerely. The clever phrasing offsets in a measure the lack of inevitable logic in the character drawing, for Mr. Sturgis is adept in cameo cutting; and, notwithstanding the weak construction, the book on the whole is decidedly worth reading. (Scribner. $1.50.)

Tom Beauling

GOUVERNEUR MORRIS' brief story has the spontaneity of a promising first book. With an all-round-the-world setting, a mighty hero of great good-nature and mental and bodily attractiveness, a heroine who is the daughter of a New York multi-millionaire, and a style of flippant dash, it is dedicated with apparent fitness to Richard Harding Davis. The device that leads to the final tense situation is without artistic justification. (Century. $1.25.)

Mrs. Wiggs of the Cabbage Patch

ALICE CALDWELL HEGAN gives a sympathetic account of the brave struggle of Mrs. Wiggs and her five children. There is a pretty love story woven in, and the book is delightful for its unfailing optimism. With its experiences evidently drawn from life, the book shows in a glimpse how cheerfully the "other half" sometimes lives. (Century. $1.00.)

The Road to Frontenac

Mr. SAMUEL MERWIN has already proved his mettle as a writer by his authorship, in collaboration with Mr. Webster, of two very dashing "business novels." In this first story on his own account he has made a very charming romance of those picturesque days when the mighty St. Lawrence was the only road not only to Frontenac, but to the whole vast Northwest. The scenes of Indian life and the stalwart French frontier captain are handled with considerable skill, but perhaps the le thing in the novel is a certain delitic flavor in the love story—as much in place in the tale as any wild anemone in the woods. (Doubleday, Page. $1.50.)

In the Forest

Mr. MAXIMILIAN FOSTER is known chiefly as a writer of vigorous magazine short stories. He has succeeded admirably in catching the spirit of the deep woods and in making one realize, by a reiteration through eight or ten chapters, the life of the deer and caribou, the moose and other "big game." It is a short gamut of Terror and Tragedy; but there are some genuinely poetic descriptions of forest scenes, and the interest of the tales is undeniable. It is a book, too, that falls in pat with the vigorous love of the forest. (Doubleday, Page. $1.50.)

Irish Pastorals

SHAN F. BULLOCK gives a thoroughly good picture of Irish peasant life in a series of tales that show the mixture of tragedy, comedy, sentiment, humor and pathos in the Irish nature. The dependence of his hard-working peasants on sunshine is one of Mr. Bullock's most skillful touches. In any mood his characters are interesting; all are consummately Irish. The stories are well told with undeniable vitality. (McClure, Phillips. $1.50.)

The Sign of the Prophet

Disguised as an historical novel, written around the incidents in General Harrison's campaign against Tecumseh and the later events in the woods about the lakes, during the war of 1812, JAMES BALL NAYLOR has given us a poor imitation of the Indian stories which we loved so as children. Doubtless, to grown-ups the small boy's treasured Indian story seems very tame, and so in justice one should not view "The Sign of the Prophet" from any other standpoint than that of the child who is ready to believe. Even then, it is inconclusive and very poorly worked out. There are possibilities in some of the situations, and one or two of the characters, but, on the whole, the book is tiresome. (Saalfield. $1.50.)

Woman and the Law

Written for women, this book by GEORGE JAMES BAYLES, though of little value to the student or the lawyer, is a clear and accurate exposition for the general reader who wishes to learn the legal status of women in the United States. It covers domestic relations, property relations, and public relations. The technical subject of property is especially well handled. (Century. $1.40 net.)

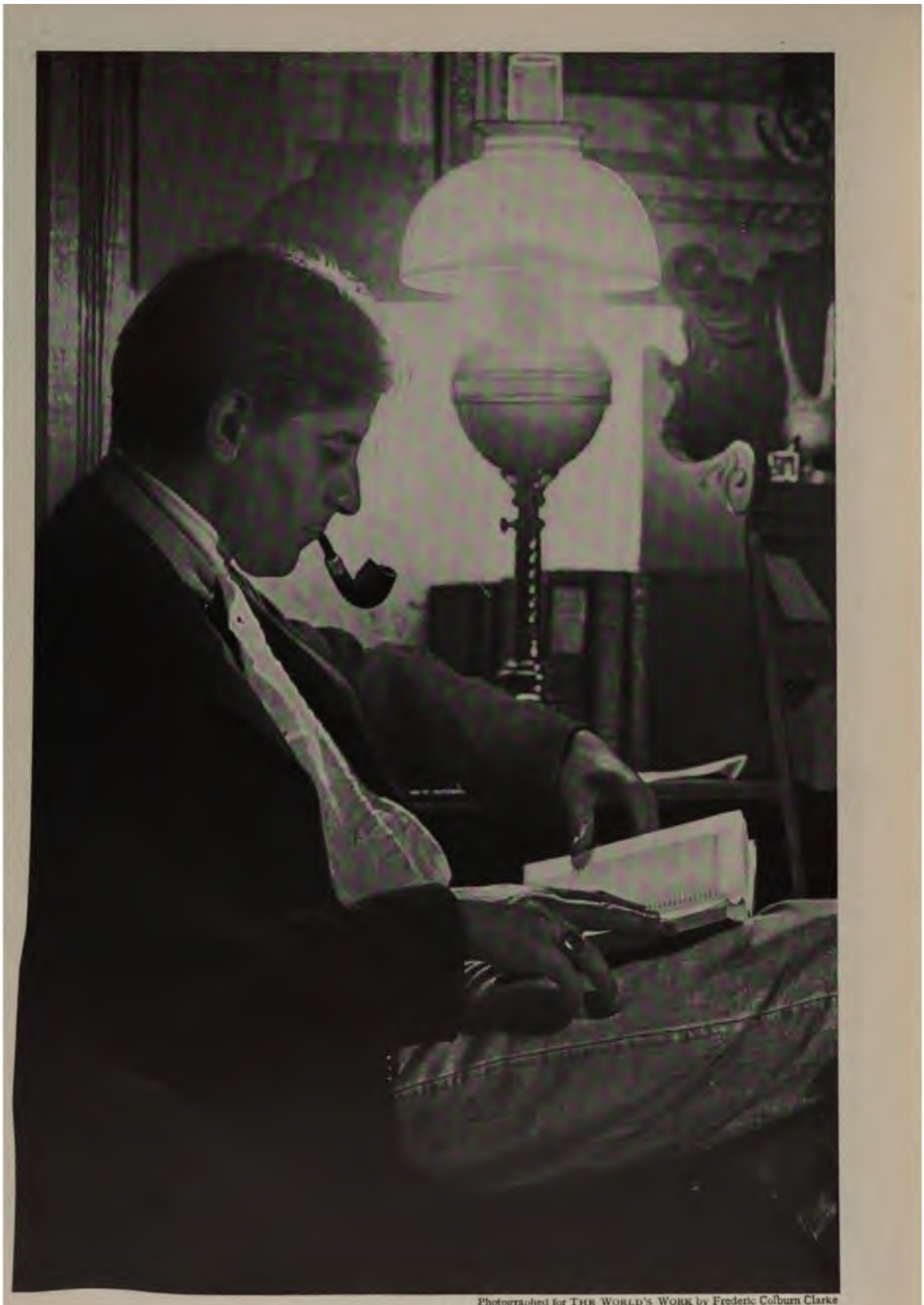
A Day with a Tramp and Other Days

Apparently this is the aftermath of "The Workers"; it is a series of incidents from the note-book kept by WALTER A. WYCKOFF when he tramped the country in 1891 to learn the real condition of the unemployed. Yet, though the best of what the writer had to tell went into "The Workers,"

Photographed for THE WORLD'S WORK by C. D. Sherman

WINSTON CHURCHILL

At his home at Windsor, Vermont
Author of "The Crisis"



Photographed for THE WORLD'S WORK by Frederic Colburn Clarke

FRANK NORRIS

In his working hours at Greenwood Lake
Author of "The Octopus"

these odds and ends have sufficient value in connection with the earlier books—and even on their own account—to make them worth while. The opening tale, moreover, has a touch of romance. All the little narratives of daily happenings in the life of a real "journeyman" are interesting; the first has the qualities of a capital story. (Scribner. $1.00 net.)

The Supreme Surrender

A. MAURICE LOW details the rather extraordinary love-affair between the most distinguished member of the United States Senate (married) and the fascinating daughter of the Secretary of the Interior. By divorcing his wife the Senator sacrifices a Presidential nomination: the "supreme surrender." The plot is preposterous, but the book has some value because of its author's frank dicta on Senatorial manipulations and the sub-surface politics of Washington. (Harper. $1.50.)

Aguinaldo

This is a narrative of military and political happenings before and after the Filipino insurrection, by EDWIN WILDMAN, a brother of the late Rounseville Wildman, and correspondent for the New York *Journal*. His matter is loose in texture, though put together interestingly. The book is a defense of the widely censured acts of the Consuls at Hong Kong and Singapore rather than a character study of Aguinaldo. General Otis is criticised for failing to "heed the advice of United States agents long resident in the Orient." It may be said that the author's imagination has been of considerable use in the compilation of his facts. (Lothrop. $1.20 net.)

THE MONTH'S MOST POPULAR BOOKS

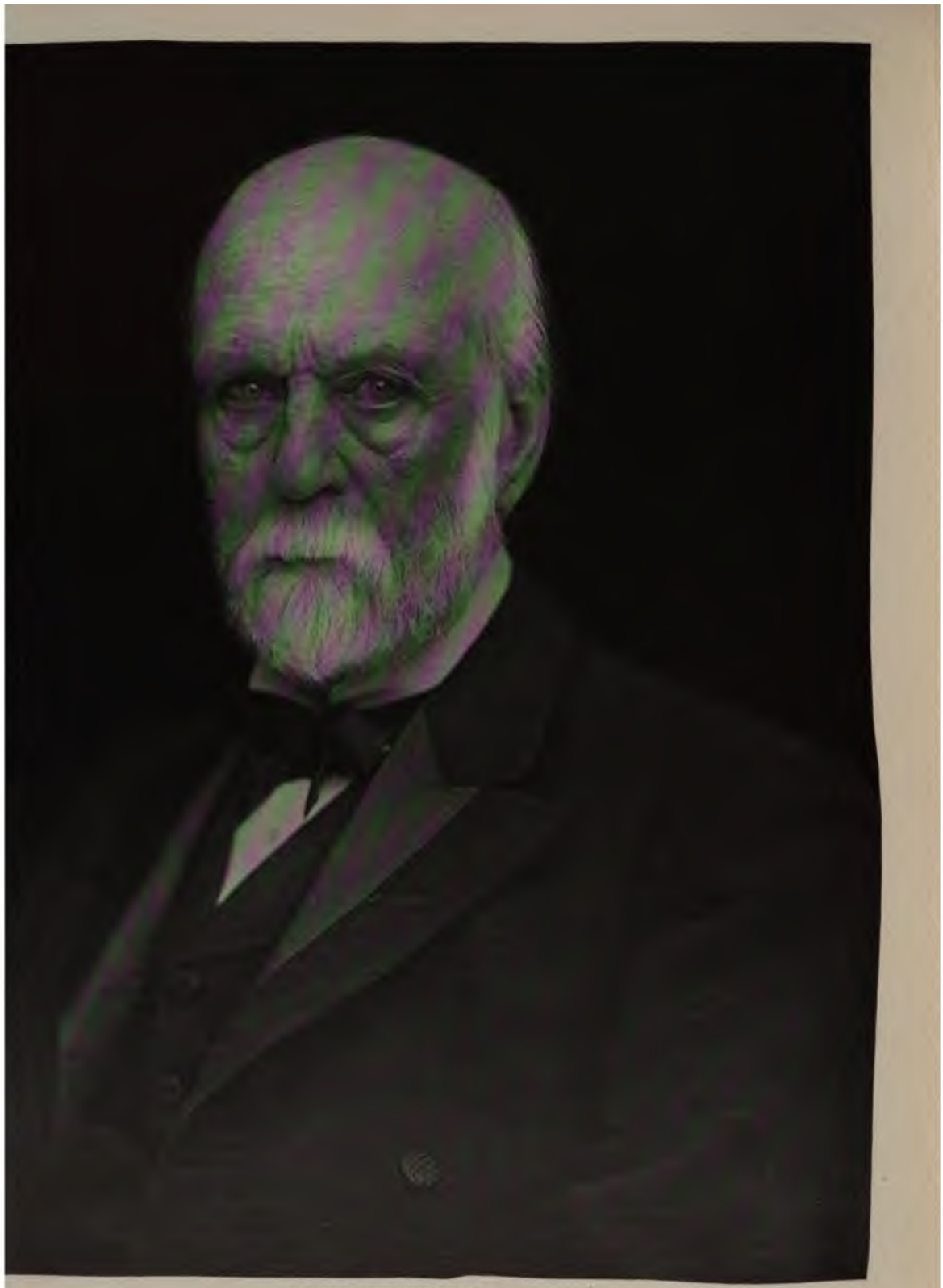
REPORTS from booksellers in Boston, Toronto, Buffalo, Cincinnati, Pittsburg, Philadelphia, New York, Louisville, Rochester, St. Paul, St. Louis, and Washington, and from librarians in Jersey City, Springfield, Detroit, Minneapolis, Hartford, Brooklyn, Chicago, Los Angeles, Buffalo and Bridgeport combine into the following lists showing demands for books:

BOOK-DEALERS' REPORTS

1. **The Crisis**—Churchill. (Macmillan.)
2. **D'ri and I**—Bacheller. (Lothrop.)
3. **Captain Ravenshaw**—Stephens. (L. C. Page.)
4. **The Eternal City**—Caine. (Appleton.)
5. **Tristram of Blent** — Hope. (McClure, Phillips.)
6. **The Right of Way**—Parker. (Harper.)
7. **Blennerhasset**—Pidgin. (Clark.)
8. **J. Devlin-Boss**—Williams. (Lothrop.)
9. **Graustark**—McCutcheon. (Stone.)
10. **Cardigan**—Chambers. (Harper.)
11. **The Octopus**—Norris. (Doubleday, Page.)
12. **Sister Teresa**—Moore. (Lippincott.)
13. **Tarry Thou Till I Come**—Croly. (Funk & Wagnalls.)
14. **Jack Raymond**—Voynich. (Lippincott.)
15. **The Helmet of Navarre**—Runkle. (Century.)
16. **The Turn of the Road**—Frothingham. (Houghton, Mifflin.)
17. **Cinderella**—Crockett. (Dodd, Mead.)
18. **Truth Dexter**—McCall. (Little, Brown.)
19. **The Tribulations of a Princess** — Anon. (Harper.)
20. **The Puppet Crown**—McGrath. (Bowen-Merrill.)
21. **Foma Gordyeef**—Gorki. (Scribner.)
22. **In Search of Mademoiselle**—Gibbs. (Coates.)
23. **The Potter and the Clay** — Peterson. (Lothrop.)
24. **The Supreme Surrender**—Low. (Harper.)
25. **Katherine Day**—Fuller. (Putnam.)
26. **A Summer Hymnal**—Moore. (Coates.)
27. **My Strangest Case**—Boothby. (L. C. Page.)
28. **The Visits of Elizabeth**—Glyn. (Lane.)
29. **The Inn of the Silver Moon**—Viele. (Stone.)
30. **A Sailor's Log**—Evans. (Appleton.)

LIBRARIANS' REPORTS

1. The Crisis—Churchill. (Macmillan.)
2. The Helmet of Navarre—Runkle. (Century.)
3. Eben Holden—Bacheller. (Lothrop.)
4. Alice of Old Vincennes—Thompson. (Bowen-Merrill.)
5. D'ri and I—Bacheller. (Lothrop.)
6. The Puppet Crown—McGrath. (Bowen-Merrill.)
7. Graustark—McCutcheon. (Stone.)
8. A Sailor's Log—Evans. (Appleton.)
9. Truth Dexter—McCall. (Little, Brown)
10. The Tribulations of a Princess—Anon. (Harper.)
11. Miss Pritchard's Wedding Trip—Burnham. (Houghton, Mifflin.)
12. Tarry Thou Till I Come—Croly. (Funk & Wagnalls.)
13. The Life of Phillips Brooks—Allen. (Dutton.)
14. Penelope's Irish Experiences—Wiggin. (Houghton, Mifflin.)
15. Babs the Impossible—Grand. (Harper.)
16. Up from Slavery—Washington. (Doubleday, Page.)
17. When Knighthood Was in Flower—Major. (Bowen-Merrill.)
18. The Life and Death of Richard Yea-and-Nay—Hewlett. (Macmillan.)
19. The Octopus—Norris. (Doubleday, Page.)
20. Uncle Terry—Munn. (Lee, Shepard.)
21. The Visits of Elizabeth—Glyn. (Lane.)
22. The Riddle of the Universe—Haeckel. (Harper.)
23. A Carolina Cavalier—Eggleston. (Lothrop.)
24. Like Another Helen—Horton. (Bowen-Merrill.)
25. When Blades Are Out—Brady. (Lippincott.)
26. The Right of Way—Parker. (Harper.)
27. The Gentleman from Indiana—Tarkington. (Doubleday, Page.)
28. Eleanor—Ward. (Harper.)
29. The Sky Pilot—Connor. (Revell.)
30. Every Inch a King—Sawyer. (Dodd, Mead.)



ABRAM S. HEWITT

dal that the New York Chamber of Commerce recently presented to Mr. Hewitt for his services in the promotion of rapid transit in the city was inscribed: "ABRAM STEVENS HEWITT, aged 78." On the reverse side: "By his Genius Benefactor of the City and Conservator of the Commonwealth."

IT has been said that in the nineteenth century thirteen great discoveries and inventions were made, as against six of all the preceding ages. The world is doubtless doing more in a month than it used to do in generations. Concrete progress of many nations is shown in a hundred ways within a few weeks. A new passenger steamship—the *Kronprinz Wilhelm*—typically German in the beauty of its decorations, and built in Germany, lately crossed from New York to Plymouth on the return from its maiden trip in five days and nine hours, over two hours better than the previous record. And a new liner is being constructed by the builders of the *Kronprinz* which is to be even faster. *Le Savoie*, daintily French in decoration and built in France, also a fast traveler, recently made its first journey to America. By wireless telegraphy a fog-bound steamer 140 miles in the offing has talked with the shore. New records of speed for distances up to six miles have been made by automobiles, and endurance runs have shown their increased staying powers. Engineering triumphs are being achieved in the streets of New York and in the heart of Africa. American trade is realizing its possibilities abroad, and European countries daily think better of us. Railroad trains are running more rapidly and freight is being carried more cheaply. Education and the arts are expanding with our industry and commerce. And these are only a few plain evidences of growth. The outward din of progress is only an indication of the silent, steady advance beneath.

THE PROGRESS OF THIRTY YEARS

THE Treasury Department recently issued a table showing the growth of the material industries of the United States since 1870; and it is a thirty years' record of growth that will astonish even those who have been most familiar with it. Although these large facts take on rather a dull hue when they are expressed statistically, there are some interesting comparisons of items in the long table. For instance, the population in these thirty years has increased 98 per cent.; but the salaries paid in the public schools have increased 240 per cent.; the receipts of the Post-Office Department 418 per cent.; the number of telegraph messages sent per year 770 per cent. In other words, a doubled population pays three-and-a-half times as much to public school teachers; spends more than five times as much in postage; and sends nearly nine times as many telegrams. We produce two-and-a-quarter times as much wheat as we produced thirty years ago, three-and-a-quarter times as much cotton, but hardly twice as much corn. By far the largest increase that has been made in any product is the increase in steel—from less than 70,000 tons to more than 10,000,000. Our reports of manufactures are five-and-a-half times as large as they were thirty years ago; and of our agricultural products two-and-a-third times. But in this time our total imports have not doubled, and their *per capita* proportion has slightly decreased. Although the population has not quite doubled, the amount of money in circulation has increased more than threefold, and the *per capita* circulation is more than half as large again as it was; and the deposits in savings banks are four-and-a-half times as great, but there are not quite four time as many depositors.

These are dry facts when they are condensed into this brief sort of arithmetical statement, but the story of social, financial, and industrial growth that they tell is an eloquent and impressive one, the like of which was never before known in the world.

THE EXTENSION OF TRADE

Exporting Manufactured Goods

WHILE the total exports of the United States exceed in value the exports of Great Britain, it must not be forgotten that our exports include agricultural products. Of manufactured goods England is still shipping more than twice as much as we are. And this is not because all sorts of goods cannot eventually be made in America relatively as cheaply and as well as our locomotives and our bridges. It is because our export trade is in its early stages; we are only just beginning to realize that we have a large foreign market waiting; prejudices

still weigh against American goods; we have as yet no considerable merchant marine; American salesmen are only beginning to go abroad in large numbers; and it is only in the last few years that the large number of exporting concerns have sprung into prominence and prosperity. It is only six or eight years ago that a certain manufacturer sold an exporting house a bill of $300 worth of ploughs for export, and thought that he had been strikingly successful. Last year he sold the same firm alone $160,000 worth, and thought nothing of it. American machinery of all sorts is being recognized in the centres abroad as of the highest excellence, and through the effective work of the consular service, commercial bureaus, commercial museums and the local exporters the manufacturers are reaching out rapidly. An American salesman on a journey through the Mediterranean recently was forced by the disabling of the vessel on which he sailed to stop for a week or two at Malta. He scarcely supposed that American goods were known there, but he was a Yankee and a salesman and couldn't stay idle. He found that the people knew a good deal about American products, thanks to an efficient consul, and he taught them more, incidentally taking some unexpected orders. Our exports to Malta for the year ending June 30, 1899, were $84,577. This last year they amounted to $301,966.

As a rule, manufacturers are looking abroad for more trade each year. Many well-known concerns in England and elsewhere are buying direct from the American factory. Even now in things made of steel and iron manufacturers are paying commissions and freight charges and underselling competitors. There is, for example, an article made here of iron, which is sold in Birmingham cheaper than the original article, which is made in Birmingham and of which the American product is an imitation, can be put on the market. This is undoubtedly the result of better machinery and more skilled labor. Let the same article be of brass, on the other hand, and the foreigner can undersell, probably because there is more handwork and English labor is cheaper. That England still buys its cotton from America, makes its product and sells it in South America, is a fair proof that America is only just beginning to recognize its opportunity.

The prejudice against goods made here, because of old-time disregard for the place of the United States in trade, the sudden realization of our coming supremacy, and the lack of reciprocity, does not extend to Australia, New Zealand and South Africa. American goods enter upon the same footing with those of any other country, and these markets get a goodly amount of the superfluous product.

Trade abroad is only beginning to be considered seriously by many manufacturers. When the same system and keenness of attention are given it as are spent on our domestic trade, the records of the last decades will be likely to sink into unimportance and commonplace.

Making Competent Workmen

THE reason that is most readily given for the ability of American manufacturers to meet foreign competition abroad upon an equal footing, when a handicap of freight charges and higher priced labor is added, is that American workmen are more skilled, more intelligent and more ambitious. Many of the largest concerns, recognizing this, are doing what they can to educate the boys of the shops from the probability of drudging all their lives at cheap work which any man can do, up to a possibility of doing all kinds of skilled labor and of knowing why they do it.

At the Brown & Sharpe Company's works, in Providence, R. I., for example, apprentices are hired not only in the machine shop but in the foundry and pattern shops as well. The system is regarded as a simple business arrangement rather than as a school, although those who are under apprentice contract are taught their trade carefully, and an overseer watches and helps the boys at their work. The practical intention of the company of making their apprentices understand that they are earning as well as learning, may be seen in the terms that are made with them. Applicants for apprenticeship at Brown & Sharpe's shops must be between sixteen and eighteen years of age, must be sound physically, of good moral character, and equipped with an education equal to that of a high-grade grammar school graduate. A boy that fulfills these conditions is given a trial of 480 hours' service. If he is satisfactory and satisfied he begins a regular term of four years, working 295 full ten-hour days a year. The company selects the time when vacations may be taken. Any time lost must be made up at the end of each year and he cannot begin his new year until his time for the previous year is entirely completed. Rules must be kept and the shops are kept clean of tobacco in any shape. During the first year the boy is paid six cents an hour, during the second eight cents, the third ten cents, the fourth fourteen cents, but the company can at any time terminate the agreement for neglect of rules, indifference or incapacity, paying under such conditions six cents an hour for the entire term of service given. Everything possible is done to make the boys practical and able workmen, because the company then gets an adequate return for the money and care

it expends. It is naturally apt to retain the skilled labor it makes, but whether it does or not, it gets the worth of its expenditure during the apprentice period, the boys are taught their trades thoroughly, and the country is the richer for more practical men to keep it in the van of mechanical progress.

American Manufacturers at the Glasgow Exposition

By Chalmers Roberts

AFTER all of the "Wake up England" noise of last winter, it needed some ocular demonstration to prove to the English people generally that the causes for their lost commercial position lay in something other than "natural advantages." Either they waved away the whole discussion as a journalistic sensation, citing the prosperous condition of individual industries as proof; or else they submitted as to the inevitable and said it was no fault of the able British manufacturer who had taught the world or of the sturdy British workingman who had enriched it. But plain proof has been furnished at the Glasgow Exposition. If the fair at Buffalo has been a home celebration of triumphant American producers, that in Scotland has been almost equally one abroad. Even for those who have not attended, all of the papers have made plain the supremacy of American industrial exhibits in what is claimed to be the largest and most complete exhibition of machinery on record. The display of American machinery and especially of American tools has given English visitors much food for thought. The proudest achievements of British foundries and engineering shops are there and they are amazing enough in their way, but they sink into comparative insignificance by the side of the stands from the United States. The collection of American engineering tools is without doubt the finest that has been seen on this side of the Atlantic and it brings closely home to native minds the fact that the older country is dropping behind in the race. A curious development which I have noticed in connection with comments on this exhibit has been the delighted way in which Englishmen console themselves that the Americans are beating the Germans as well. Undoubtedly they much prefer to have us win, once they are out of the race. And this fact alone might lead to many important and interesting deductions if followed out.

Without wishing to give undue mention to any one of the many American exhibits there is one stand held by a Milwaukee tool company which has, perhaps, received more notice than any other and which I have seen hailed in several notices as a perfect revelation to the British machinist. Everyone admits that such a collection of lathes, drills, cutting and turning tools of every kind could scarcely be produced by any British maker, certainly not of such exquisite finish and durability. It almost appears in fact, on looking at this magnificent display of Transatlantic skilled workmanship, that the steelworkers here had given up the task of trying to beat American toolmakers. As a matter of fact there is not a single English concern which could equal it.

Glasgow, the commercial metropolis of Scotland, is itself almost completely Americanized as to electrical installations, for not only at the fair but in the city all the electric power and lighting is American. The Westinghouse Company, which by the way has a splendid exhibit of its own at the exposition, works the tramways and lights the streets entirely; while their brakes, of course, are on all the railways running into Glasgow. In the manufacture of printing machinery also are the inroads of American competition very evident. Here, however, there is more show of competition by British makers. Of course there is nothing to equal the four-roll Hoe press on exhibition which has been made for the Glasgow *Herald*. But most of the magazine and job printing machines are English and experts claim that these are more than equal to similar American machines in all but speed, which, they console themselves, is not everything in fine printing. They claim superiority in that desideratum of the modern printer, a dead true register. In fact, Messrs. Payne & Co., of Otley, makers of the well-known Wharfedale machines, claim that, for accuracy and reliability, the Yorkshire machines on exhibition are a challenge to the world. Even such a challenge has come to be a noticeable thing.

The United States in Holland

THE Premier of Holland, Dr. Kuyper, in a speech early in October, said some interesting things about the prosperity of his country. Savings banks there in sixteen years have increased their accounts seven-fold and private banks have doubled their capital in the same period. Imports, exports and steam tonnage had greatly increased, and the average Hollander had grown taller, stronger and more prosperous in the half century. And the United States is taking a rising place in the good opinion of the Dutch. Mr. Frank D. Mills, the American consul at Amsterdam, in a letter to this magazine has the following to say of the standing of this country there:

"United States interests in the Netherlands are large and constantly increasing. Amsterdam holds $250,000,000, market value, of American securities, ranking next after London as a market of American stocks and bonds, while the Nether-

lands are our third customer in Europe, buying more merchandise from us last year than did France. The exports from the consular district of Amsterdam for the fiscal year, ended June 30, 1901, also rose from about twelve million dollars the preceding year to about sixteen million dollars, tobacco and diamonds being the chief articles invoiced here.

"Our import trade, as has been stated, is flourishing, is on a rock-ribbed basis and is advancing markedly in manufactured goods. This office has become, as a friend has remarked, during the last year a sort of telephone exchange, answering calls and making connections on both sides.

"The Netherlands have been recently added to the area of well-worn summer play-grounds for Americans, and now about fifteen thousand Americans visit Amsterdam annually.

"English is read and spoken very generally and a certain class of late issues of our press and magazines are found on sale at Amsterdam and other centres.

"There is no American colony here, Dutch cities being merely way-stations for tourists proceeding to the interior Continental capitals and vice-versa."

There are many things which the Hollanders, conservative, solid Europeans that they are, doubtless do not understand or appreciate in American methods and development. But they know that American credit is good, that American merchandise is satisfactory; and they like the nation as a people.

Trade with the Philippine Islands

THE recent report of the imports of foreign goods in the Philippines showed conclusively the hold that England and Germany have upon the trade there. And there is reason for the success of these countries at Manila. For years the exporters and manufacturers have studied the needs and demands of the mixed people there until they know thoroughly what to send them. The expansion of American trade has not been able to reach the Philippines in any large way as yet. It is too much of a novelty to sell any considerable bills of goods to England and France and Germany, South Africa and Australia for Americans to catch up the ends and edge of trade centres with any considerable care. With the Philippines as with many of the South American countries the selling of Yankee products is comparatively little more than a prophecy. As in South America, capital from the United States is attempting a number of projects, like the opening of mines and the building of railroads in the new possessions. The large proportion of American manufactures which are sold there are machinery, tools and hardware, articles like bolts, knobs, nails and the like. And in nearly everything that exporters send from the United States they have little fear of the competing foreign lines. The men with whom they have to deal are, in the main, Chinamen who are the merchants of the Philippines. "The Filipinos themselves," as an exporter who has sold goods there, remarked the other day, "are good for nothing except sleeping and smoking."

America's trade with the Philippines will grow with the rest of its foreign shipments, but the larger, older and more solid markets will be furnished first. It must be remembered that the commercial nations abroad have gone into the by-ways of trade after they had met and knew thoroughly the demands of the larger trade centres.

IN THE FINANCIAL CENTRES

The Trusts and Publicity

MUCH of the popular opposition to "trusts" has sprung from the secrecy with which they have been managed; and the fluctuating favor in which industrial securities have, as a rule, been held by careful investors springs from the same cause. Banks and railroad companies must make their business known; but industrial companies have generally shunned publicity. They have paid their dividends and said nothing, or they have passed their dividends and suffered the consequences. Their minority stockholders have known little of the real condition. It has long been plain to thoughtful students of industry and finance that the time must soon come when the safest industrial organizations will work in daylight. Many of them are semi-public. The public has a right to know something of the financial condition of such organizations. From their own point of view, too, frankness to their stockholders, the stability of their securities and public esteem require publicity. It is understood that the United States Industrial Commission will recommend compulsory publicity about all semi-public organizations; and political platforms are beginning to demand it. Witness the Democratic platform of Massachusetts.

It is, then, not surprising, but it is very gratifying that the American Steel Corporation saw fit on October 2nd to publish a report of its earnings. It declared a quarterly dividend 1¾ per cent. on its preferred stock and of 1 per cent. on its common stock; and it gave out a statement of its net earnings for six months by months, its interest payments, the sum set aside for its sinking fund and the surplus left in the treasury. Its report was thin as compared to that of a large railroad, but it was a step in the right direction.

The importance of such a statement is that if

one great industrial corporation makes such a report, others will in time be obliged to follow its example. It is the first movement towards putting industrial securities on as safe a basis as railroad securities; and—even more important—it is a long step towards bringing about a better understanding between trusts and the public.

An Illustration in Copper

WALL Street has but lately seen the results of lack of publicity. In September the Amalgamated Copper Company announced a reduction in its dividend from an eight per cent. annual rate to six per cent. and the price of its shares declined thirty dollars per share from top figures. This company is a combination of mines, smelting plants and a selling agency. In approximate figures the world's copper production is 1,100,000,000 pounds; American copper production is 600,000,000 pounds; Amalgamated copper production is 170,000,000, and the Amalgamated Selling Agency controls 400,000,000 pounds. The Amalgamated Copper Company controls then nearly twenty per cent. of the world's production and thirty-three and one-third per cent. of the American output. In 1870 the copper industry of the country amounted to little. The growth since that time can be seen by comparing decades.

1880	27,000 tons
1890*	116,000 "
1900	300,000 "

*Lake Superior, thirty-nine per cent.; Montana, forty-three and one-half per cent.; Arizona, thirteen and one-half per cent.

In the face of this increase the mines received high record prices.

The reason for the decreased dividend may be traced to overproduction in the face of declining exports, particularly to Germany. The condition of the trade in Europe has reduced our exports one-half. Meanwhile the price of copper has not been lowered. But the reason for the break in the market was that the Amalgamated Copper Company is a representative of the "blind pool," and is not frank with its stockholders. The stock exchanges might compel periodical reports or the state government might insist on licensing only to companies who will make public their affairs. In either case legislation would mean a saner, steadier market.

BUILDING AT HOME AND ABROAD

A Mine in a City Street

TO discover mining operations conducted on a large scale in the streets of a city gives striking indication of the magnitude of the engineering problems entailed by the new Rapid Transit Subway in New York. Far uptown, at the corner of 168th Street and the Boulevard in New York, on a rocky hill of the same material as the Palisades across the Hudson River, stands a little building recognizable by one who knows mining as a shaft house. Up at 181st Street is another. Inside each is an engine and a drum; outside is a framework for two elevators that run alternately up and down a great square shaft—the mine. Beside the framework at 168th Street runs a little track upon which loaded material cars bowl down the Boulevard and 165th Street to dump the mine refuse, conserving energy by pulling up the "empties" by the momentum of their down-rush.

When Engineer Kinsley faced the problem of driving the tunnel through 11,000 feet of rocky hill, a stretch as long as the whole Boston Subway, he found it necessary to sink two shafts in order to attack the hill in six places at once—at 157th Street, where the burrowing begins, at each shaft in both directions, and at the Fort George end. Just a year ago, therefore, he broke ground for two shafts. With great rapidity the work has been pushed forward. On the 1st of October the drifts from the shafts had been driven 800 feet in each direction, making over a thousand yards of completed tunnel.

At four A. M. every day Mr. Kinsley and Foreman Smith, going down the elevator and along the tunnel to the heading, mark out the work to be done that day, and set up the drills. Then at six comes the first shift—thirty-five men at each heading. The tunnel with its long row of dimly shining electric bulbs becomes a banging, hissing, vibrating pandemonium; a dozen compressed-air drills thud away in all directions, with boys pouring water into the drill holes, and Italians scrape and shovel away the debris at the bottom of the slowly disappearing wall. The tunnel is surprisingly dry and the air, which comes from the exhaust of the drills, is plentiful and pure. At two comes on the second shift to work until ten. As soon as they have finished, all drills and tools are carried back through the tunnel, the drill holes are charged with dynamite, a wire is attached to the electric lighting wire, the switch is thrown and then the whole drift seems to cave in with a roar. But soon the compressed-air pipes clear out the smoke, and the small night shift starts cleaning up in readiness for the morning.

In no essential particulars do these mines, with street cars running 100 feet above them, in New York City differ from the mines of Michigan and Colorado. Where timbering is necessary it is regular mine timbering. The tunnel has become the home of an army of rats; no mine is lucky, miners say, unless it harbors rats. The four mules employed in each tunnel are

stabled there below near the bottom of the shaft. Never going up to the surface, they plod steadily along the tramway with their carloads of rock. With all the manifold activities of an Eastern city above it, pleasure carriages on the Boulevard, rumbling wagons on the pavement of Amsterdam Avenue a stone's throw away, the erection of new buildings that will soon blot out the greenery that still exists in the region, the mine a hundred feet below is typically Western. A trip down the elevator shaft at 168th Street—a trip that hundreds will take when the Subway is finished—is like an Arabian Nights' transformation: one moment the bustle and sunlight of a busy New York suburb, the next a Black Hills sump.

Upon the completion of the work the shafts will accommodate elevators for the Subway passengers. Spreading out from the foot of each—they run down at one side of the tunnel, not straight into it—will stretch great vaulted rooms 300 feet long, 53 feet wide and 28 feet high, with a concrete lining faced with vitrified tile, after the manner of the Boston Subway stations.

In Commemoration of Mr. A. S. Hewitt's Long and Varied Public Service

THIS subway which is now in process of construction under New York City is not only the most extensive work of such a nature that was ever undertaken, but it is one of the most noteworthy municipal enterprises in the world. Its construction involves no additional taxation and at the end of fifty years it will be the unencumbered property of the city.

Great credit for this crowning achievement of urban transit is due to Mr. Abram S. Hewitt, who as a public-spirited citizen, and as Mayor, has had to do with the development of rapid transit in New York from the very beginning. More than half a century ago he made the rails for the first tramways in the city. In recognition of his distinguished service, the New York Chamber of Commerce, on October 3rd, presented to him a beautiful gold medal. By his long public service, his good deeds in many capacities and by his ever-ready public-spirited action, Mr. Hewitt has, perhaps, won the distinction of being the foremost citizen of New York.

Pittsburg's New Office Building

UP to the middle of last April the city block in Pittsburg, which is bounded by Fifth Avenue and Diamond Street, Scrip Alley and Grant Street, with St. Peter's Episcopal Church at one corner, was as it had been for years, seemingly unmindful of any threatened danger. Then, one day, a gang of men appeared, and in six weeks the entire area was cleared of its buildings. Today, six months after the beginning of the invasion, a handsome office building of twenty-two stories, built of white granite, which will cost $3,000,000, has its framework entirely up, and the building is well on toward completion. It is expected that it will be ready for occupancy early in the spring. Nearly one thousand men are daily at work.

This rapid transformation is due to Mr. H. C. Frick who, it is said, has seen to it that the plans for the fittings inside as well as without will compare with the most adequate office buildings in the world. Hard wood will be the material. The land on which the building rises contains 23,100 square feet and cost Mr. Frick $1,250,000. By a simple multiplication the aggregate floor space of the building will amount to upwards of 250,000 square feet. When completed it will probably be, next to the Broad Exchange Building in New York, the largest office building in the world. Across from the new Frick Building is the old Carnegie Building, where are the Pittsburg offices of the United States Steel Corporation. It has been suggested that "the Trust" may close their old offices and move to the newer building.

Incidental to the work on the building this summer there was an episode that shows what an atmosphere for striking seems to hang about Pittsburg and about the man for whom the structure is being built. The men struck because the builders, the George A. Fuller Company, would not allow them to have a regular supply of iced lemonade instead of oatmeal water, and held up operations for several days. They finally were convinced, however, that lemonade was not good for them and went back to work.

American Enterprise in the Heart of Africa

SO brief has been the time since "Africa" stood for a steaming, impassable jungle that contemporary news from the Dark Continent has an air of unreality. Yet so rapid has been the advance, that places which Livingstone and Stanley reached with the greatest difficulty and danger are now busy centres of activity. Backed by the irresistible power of Cecil Rhodes the Cape to Cairo Railway is pushing into the wildernesses, and for the past three months a goodly proportion of the work has been done by American workmen.

At the railhead in Uganda, to the northwest of Victoria Nyanza, in British East Africa, the road ran into a region gridironed with streams. The firm of Sir Alexander Rendle was called into consultation and it was decided that the district should be crossed by a series of viaducts. The contract was given to the American Bridge Company. They were to construct twenty-eight

open-work steel viaducts, and they were to do the work with their own workmen and engines.

For three months the company has been shipping bridge parts from its works at Pencoyd, Pa., to Mombasa, on the east shore of Africa. Thence the steel trusses and beams are sent up to Uganda, where Engineer Lueder and a gang of workmen fit them into bridges. When the contract is completed, another interesting chapter will be added to the story of the achievements of American engineers abroad.

WITH THE RAILROADS

Railroad Rates and Records

WITH 200,000 miles of rail already built in the United States, new railways are in process of construction to open up the Southwest and the Far Northwest. With freight and passenger rates almost forty per cent. lower than in Europe, there is a tendency to make them lower still. With the fastest trains in the world there is every prospect of adding to their speed. Freight rates, which often seem high to farmers whose produce the roads carry, are absurdly low in the eyes of Europeans, for it is said that wheat can be transferred from Kansas City to Liverpool more cheaply than for three hundred miles in England. The lowering of these rates has come from many causes: larger locomotives, more capacious cars, the straightening of tracks, the practice of making up train loads to the full capacity of the locomotive. Hardly a month passes that some locomotive plant does not turn out an engine larger and heavier than any built before. To allow these locomotives to make time with loaded trains from a quarter to a half mile in length it has been necessary on many roads practically to rebuild the whole track, employing heavier rails and stronger bridges and straightening the line by minimizing grades and curves. The New York Central has been at heavy expense to bring its roadbed up to the highest efficiency, and the B. & O. is carrying out a vast plan of alteration. The whole movement makes for ultimate economy. So in the building of freight cars. Ten years ago ordinary freight cars weighed ten tons and carried ten tons; now they weigh about fifteen tons and carry thirty. These cars, loaded to their fullest capacity, are formed into trains that require the greatest horse-power of big Mogul and Consolidation engines to hurry them over even well-equipped and modern roadbeds. In France an engine that is supposed to draw twelve cars must be helped by another engine if two extra cars are added to the train. On American roads it is customary to add two or four or a dozen extra cars and make one engine pull them all; by such methods freight charges are kept down.

In speed of fast trains few records are being broken. But the electric locomotive is already on the horizon. We have the swiftest long-distance train in the world and the swiftest short-distance train. The future increase in railroad speed promises to be an increase in average speed; many trains will be brought to the speed now maintained by a very few.

In a run the other day on the New York Central the Saratoga Limited ran 127 miles, from Rensselaer to Yonkers, at 62 miles an hour, making the 6½ miles from Ossining to Tarrytown at 84½ miles an hour. The Pennsylvania runs expresses from Camden to Atlantic City at 64 miles an hour, day in and day out. But the actual record holders for consistently fast running are the Atlantic City Flyers on the Reading—the fastest trains in the world. Running on a schedule that requires a speed of 66½ miles an hour, inclusive of all stops and slowings down, these trains as frequently surpass expectation as fall below it. The 55½-mile run from Camden to Atlantic City—the train is a rival of the Pennsylvania express—is frequently made from platform to platform at a speed of from 70 to 75 miles an hour, with intermittent bursts of speed running well above 80.

Long-distance records also are held by American trains. The Empire State Express holds first place with a regular run from New York to Buffalo — 440 miles — in eight and a quarter hours, a speed of over 53 miles an hour inclusive. The Black Diamond Express on the Lehigh covers 447 miles from New York to Buffalo at nearly 50 miles an hour. The Bay State Limited from New York to Boston is another speedy train, timed to cover the 232½ miles in five hours. Briefly, between all the important points in the East run trains that compare with the fastest middle-distance expresses on foreign roads, and in some cases—as with the Atlantic City Flyers and the Empire State Expresses—surpass the best trains run abroad.

Cutting Off Free Rides

A SUB-COMMITTEE representing all the railroads in the Trunk Line Association, the Central Traffic Association and the Western Passenger Association, has unanimously voted to recommend stopping the issue of railroad passes without exception. This will exclude the exchange of annual passes between railroad officials, the giving of trip passes for business or political reasons, and the common family passes on minor and branch roads. The reason for such action is undoubtedly in the abuse of the present system. Many passengers who travel free of charge crowd out those who would pay, and so extended has been the pass system that

the large roads issue thousands and tens of thousands of free rides yearly. Some are deserved, but so many are doubtful, and so difficult is it to draw the line, that an indiscriminating rule is the only thing practicable. More than this, a considerable number of the passes issued are necessarily so partial as to make the paying public feel that the roads are partial. The reform will bring many advantages to the companies and a fairer service.

PRESIDENT BUTLER ON NEW EDUCATIONAL GROWTH

"THE new educational year," says Professor Nicholas Murray Butler, Dean of the School of Philosophy and Acting President of Columbia University in New York, "opens brightly. Statistics already at hand give proof that the enormous increase of the last ten years in school and college attendance is accelerating. Even into the South the advance is spreading. There secondary schools are springing up with marvelous rapidity and filling at once.

"In the higher institutions the new term shows several significant features. More attention than ever is being paid to commerce. Such advanced commercial schools as those of the Universities of Wisconsin and California are growing speedily into favor. Graduate work is becoming more important and better supervised. The new association of American universities, at present composed of representatives from fourteen institutions, is already paving the way to coöperation in matters concerning the Ph. D. degree. The present system is haphazard; no two universities are in harmony. The new association is working toward uniformity of requirements. Another phase of the growing solidarity among the colleges is the very successful system of uniform entrance requirements now adopted by most of the Eastern colleges.

"The spread of the elective system, too, is notably swift—swifter than a casual observer can realize. Not all at once, with a violent overturn, does the system enter a college, but slowly, silently—first one course becomes elective, then another and another, until by an imperceptible change the whole college becomes elective. So with the schools, already in the main under the control of the system. With the advance of the elective system has come the cutting down of the four-year college course. In Columbia, Cornell, Yale and many other institutions a senior is allowed to count for his bachelor's degree some of the basic professional studies; at Harvard a senior by fulfilling certain conditions can register in the Law or the Medical School. The general result is that a student can secure an academic and a professional degree in six years instead of seven, as formerly. This privilege in the great universities is having the effect of drawing away students from the smaller colleges in the middle of their course. Last year forty-seven students came to Columbia from other colleges apparently to secure such advantages. In higher education then the opening of the term presents these features: greatly increased attendance, indicating, by the way, widespread prosperity; more thoroughly organized commercial training, more careful attention to requirements for the degrees that indicate high scholarship, and better opportunities for speedy completion of the training that prepares for professional life, with a growing tendency of students to take advantage of those opportunities."

THE PERSON WHO BUYS A THING MAKES IT

THIS is the motto of the Consumers' League, and in its two years' experience it has proved the truth of it. Organized to eliminate sweat-shops by persuading shoppers to purchase nothing unmarked with the League label, this band of women has succeeded in bringing under their system twenty-nine factories.

So far the League has supervised the production of white muslin underwear only. A typical factory is located at Richmond, Vermont. A fifty-acre farm encloses a long well-lighted building, heated in winter by steam. Nearby is a commodious boarding-house for the work-girls, —electric-lighted, steam-heated, and provided with a tennis court and a fruit and vegetable garden. The employees number 100 women and girls and three men, all well-paid, prosperous, and intelligent. These are the conditions endorsed by the League label. The owners of the establishment are able to compete with New York sweat-shops because of low rent, ample storage room for large amounts of raw material, and the best mechanical appliances: an electric cutter runs over a table like a lawn mower, cutting 192 thicknesses of cloth at once.

There are now thirty Leagues in eleven States, besides many active correspondents of the National League. The conditions governing the production of all the white muslin underwear in the country are known to members. Massachusetts is regarded as the model manufacturing state. The annual garment product of Massachusetts aggregates twenty-two million dollars; of Pennsylvania, thirty-two million; of Illinois, forty-two million; and New York, one hundred and twenty-six million. Though Massachusetts stands at the foot of this list, it has sixteen League factories, against two each in Pennsylvania and New York, and one each in several other States. The object for which the League is striving is to send garment makers from unhealthful slums sweatshops to country factories.

LI HUNG CHANG

THE WORLD'S WORK

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The March of Events

EVERY visitor to the White House receives a shock — an invigorating shock of frank earnestness. When you go into the President's reception room you will see some man who seeks an office for a friend or a follower, and he speaks in a low tone to the President. The President answers or questions him quickly, so that everybody in the room hears what he says: he is an audible, not a whispering, President. Another man approaches him and speaks hesitatingly. "Tell me what you have to say quickly, quickly," says Mr. Roosevelt. The story is told of a political visitor who came to seek a postal appointment for a friend. After presenting his case he said: "Mr. President, I have here a number of papers bearing on the subject. I suppose I ought to leave them with the Post Office Department."

"No, let me see them." Then as the President hastily ran his eye over them he laid aside one that was marked "Petition"; then another; and a third. "Petition," said he, "I could get a petition to have you hanged," and he gave these back to the visitor.

Mr. Roosevelt comes into his audience room alert, earnest, with the air of a man who has something to do. There's a spring in his step. There is candor in his manner and a natural cordiality, but his quickness of motion and of mind gives a new sensation. Begin to make to him the little speech that you had thought out beforehand and you soon see that he is outrunning you. While you are still in your preface, he has jumped into the middle of what you mean to say, and he answers you before you have spoken it. During a three-minutes' interview he has time to rush you forward with your story, to take in and digest all that you meant to say, to laugh, to look you in the face squarely, to give you an answer, to shake your hand cordially; and you are gone with your speech undelivered, but he has perfectly understood you and your errand. Before you are done thanking him he smiles and waves recognition to an acquaintance at the other side of the room—swift, earnest, cheerful, no such interviews have been held with any other man that ever gave audience in the White House. As unconventional as Lincoln, as natural as Grant, as earnest as Cleveland, and swifter than any of them by an immeasurable difference, Mr. Roosevelt does graceful but fatal violence to "the Presidential manner."

For there was a Presidential manner, the manner that most men who have held the

office naturally acquired by the unnatural experience of spending half their lives in giving audience to political petitioners and to the makers of formal speeches. The great man came in, stood impassively, heard you till you were done, spoke as if by formula and said little; he had a look of cheerful resignation rather than of alert interest. To the infrequent visitor to the White House an audience with most Presidents has been a disappointing experience. The visitor felt as if *he* had done all the talking. He had been graciously received, but he had brought nothing away with him. The memory of an official shake of the hand and of a dignified smile lacked something of the human touch. He had talked with the President, not with the man.

Under this consulship the two are one. You see the President, but you also see Mr. Theodore Roosevelt, with a dignity really the greater and the more impressive because it is not official, but the natural manner of the man. He does not seem weary. He is busy, very busy; earnest, very earnest; but he has the manner of a man who likes his work. You recall the campaign story that was told of him when a sympathetic soul expressed deep regret that he had been obliged to get up from his bed in his car and make his fourteenth speech of that day's journey and to shake hands with another crowd. "No," said he, "don't feel sorry for me. I like it." The calling of the President's home "The White House" instead of "The Executive Mansion" and the omission, at the reception at Yale University, of the old custom of shaking hands with the whole crowd are significant evidences of his direct common sense applied to the Presidential office.

Born of a distinguished family, but the most democratic of men by habit of mind and by versatility of action, youthful, physically alert, rapid in thought, earnest and in love with life and work—these characteristics of the President have already made a cheerful impression on the public mind. The moral and mental effect of such a man in the White House is stimulating. The highest public business is done with zest. It has long been efficiently and cleanly done. But a touch of enjoyment is now added to the manner of its doing. When lunch time comes the President takes to his table, when he is free, any friends that happen to be within reach. And the White House is full of children—full of the most robust enjoyment of life, with a deep seriousness underlying it, but with a contagious cheerfulness pervading it.

Such is the man who is President of the whole people and not of one section or of one party only. The effect of an Administration by the straightforward methods of such a man will be greater than can yet be appreciated, for he makes public life far more attractive than it has been for a generation or two. It is a true saying by the London *Spectator* that he is far more like the men of the first three decades of the Republic than the convention-made Presidents of modern times. He is like the early Virginians, too, in his social grace and tact.

THE AMERICAN AND THE FOREIGN PRESS ON MR. ROOSEVELT

THE press of our own country has been exceptionally hearty in its generous and approving attitude to Mr. Roosevelt, except a part of the Southern newspapers in regard to his entertaining Mr. Booker Washington; and the public has made a very clear and sympathetic measure of the man. Judging public opinion by this test, it likes Mr. Roosevelt; and the way is thus far open to a popular administration. The gravest danger to him is not to be feared from public opinion but rather from that bug-bear of every recent President, the Senate of the United States. This "oligarchy," or "club," or "private company of public servants, limited," is the least responsive to public sentiment of all the parts of the Government. Its function, which is to move deliberately, has become a habit of not moving at all in many important matters. Thus far, of course, there is no specific reason to fear that the President will find himself hampered by it, as every recent President has; but the general danger exists. Yet Mr. Roosevelt has had experience in politics and in dealing with political managers; and he has what is far better—the complete confidence of the public in his sincerity; and this is one great advantage that the Senate lacks. It has not had the public confidence in its sincerity for many years. The danger, in fact, is that the public, its suspicion having been once aroused, may be too harsh in its judgment. But if the Senate resent youth and directness in the White House, there is this happy circum-

By courtesy of the *New York Herald*

PRESIDENT ROOSEVELT AND PRESIDENT HADLEY OF YALE UNIVERSITY

From a photograph taken as they led the procession during the recent bi-centennial celebration of the University

REAR ADMIRAL SCHLEY

Testifying before the Court of Inquiry

stance of the era into which we have come—that the people are rather fond of energy and directness in the White House as well as elsewhere.

And most of the foreign newspapers of influence have made a very fair judgment of the President. We must except, of course, those ludicrously ignorant comments of journals that think that Mr. Roosevelt has killed buffaloes on Long Island. The London *Spectator's* comment is well-informed, and this is a fair example of the best English judgment:

"When we say he is an old-fashioned American we mean that he belongs to that strong, vigorous, authoritative type which has always existed in America, and always been apparent enough in business and in private life, though of late it has been somewhat submerged in politics. The late Lord Sherbrooke declared that what he liked about one of his colleagues—Lord Hartington—was his 'you-be-damnedness.' That same quality of downrightness, fearlessness, and determination is to be found in Mr. Roosevelt. He is essentially one of those men who know exactly what they want, and mean to get it. But together with this intensity and keenness the new President is a man of moderation."

The French economist, M. Pierre Leroy-Beaulieu, calls him a Jingo who yet has the fine quality of Anglo-Saxon common sense; but it is doubtful whether "Jingo" carries quite the same meaning in the French vocabulary as in the English and American. The idea of Mr. Roosevelt's "Jingoism" that crops up in not a few of the continental papers is interesting because it is an indirect acknowledgment of a fear of the United States rather than an attempt at an accurate description of the President's personality. The *Journal des Débats*, for instance, says:

"There is, it must be admitted, cause to fear that President Roosevelt will be rather too violently devoted to the Monroe Doctrine and that his idea of imperialism will be somewhat less accommodating than that of the man whom he succeeds. . . . Nevertheless it would hardly be fair to condemn his American megalomania while he is protesting his moderation and peaceful intentions and before he has given any real cause to believe he is not sincere."

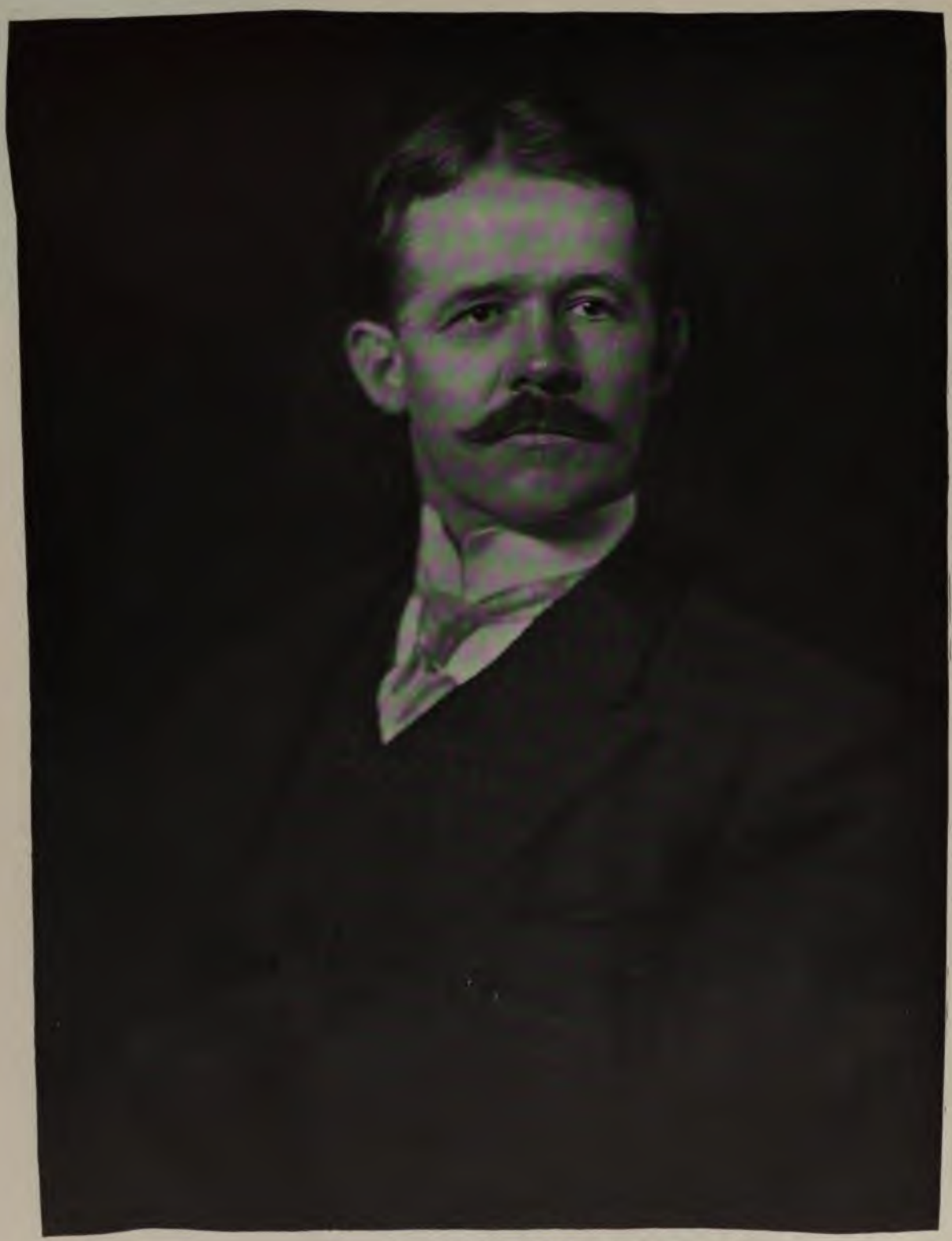
The German journals instinctively understand us better than the French, but they have a more direct reason to fear American industrial energy, and they exaggerate therefore the place that the Monroe Doctrine holds in American thought or policy. The *National Zeitung* (Berlin) emphasizes Mr. Roosevelt's persistence and energy, and says that his high sense of duty will withhold him from rash action. The *Kreutz-Zeitung* fears an "enlarged" Monroe Doctrine.

The Austrian press shows even more plainly the same fear. The generally well-informed *Independance Belge* (Brussels), which distrusts all soldiers as administrators, believes that there is danger in Mr. Roosevelt's imperialism; but the Russian *Novoye Vremya* declares that whatever may come he may be counted on as a champion of peace. One interesting fact that American readers of European journals constantly encounter is that "American imperialism" (since that campaign cry of a year ago has been utterly forgotten by us) is discussed by them as if it were a thing that one could touch or taste or feel or breathe—an interesting proof that as soon as you cross national boundaries, and especially the boundaries of a common language, political discussion of your own country follows the large lines of vague theory and facts are lost luggage.

THE PRESIDENT'S POLICY AND EFFICIENCY

THE efficiency of the public service and not partisanship is the first consideration that the President has clearly shown to be his purpose. Following several similar appointments during the first month of his Administration came the selection of Mr. Frank I. Osborne, a Democrat of North Carolina, for a vacant place on the Court of Private Land Claims. The place was made vacant by the death of a Southern Democrat and the President left the party status as it was. He followed the same principle of efficiency in appointing Mr. William Dudley Foulke a National Civil Service Commissioner. The law required the appointment of a Republican; but Mr. Foulke is much more strenuous a friend of the merit system in the civil service than he is a partisan. He has in fact shown himself to be a very sturdy Independent in politics.

The significance of such appointments is this—that while the President is a Republican and a very staunch one, and while his appointments are and will be predominantly Repub-



GEORGE W. PERKINS

lican, he will not appoint a man to office simply because he is a Republican. This is especially significant in the South where hitherto Republican Presidents have selected appointees primarily because they were Republicans. One of the most disgraceful facts in our National politics for many years has been the open venality of little Republican machines in the South. A party organization has been kept alive in some of these States solely to receive the patronage of Republican Administrations; and at every National Republican convention delegates have come up (especially the "professional" Negroes) who expected and received money payments from campaign managers for their votes. This practice became well known, and for a long series of years it has been going on openly and scandalously. Now President Roosevelt's programme of making the Republican party in the South respectable, and of appointing fit Democrats when he sees good reason to do so, will put an end to this organized traffic in convention votes, to the great help and dignity of the Republican party. Whatever party-effect such a policy may have in the South (and it can have nothing but a good effect) it will make the public service more efficient; and that is the matter of main importance.

A successful President under modern conditions must have a far greater range of practical knowledge than was required of the early Presidents; and Mr. Roosevelt measures up to this requirement. Already a long-planned assault on the merit system has been abandoned because the spoilsmen know his courageous devotion to the merit system. The professional herders of Negro convention votes in the South have not been received at the White House as "saviors of the party"; but the colored man, who better than any other stands for the best achievement and the highest aspirations of his race, and who is not a politician, has been sent for and consulted —not on his own motion; and white men of character of both parties from the same part of the Union have been called to see the President. "I have no doubt," said a distinguished Southern Democrat, "that even Mr. Roosevelt will appoint some men to office in the Southern States who ought to be hanged, but this is certain—he will not appoint them if he knows them." The old organized system of pious lying and easy credulity about Southern appointments will not work, when he refuses to supply the credulity. And the intelligent friends of the Indian look to him with the same confidence for the application of common-sense instead of a political system to their problems. In other words, the man in the White House himself knows the civil service and its needs and the merit system better than any outside friend the system has; and he knows the Indian better than any Indian agent. The pious generalities of professional reformers and the falsehoods of dishonest officials are alike out of order. He knows the army and the navy, too, as only a soldier of recent experience in the field and as an energetic executive officer in the Navy Department could know them. If a local subject come up—of preserving a forest or a mountain region as a national park, for instance—he has a personal knowledge of the subject. He has been at home in every part of the country and he has had to do with most kinds of public problems.

THE EFFICIENCY OF THE PUBLIC SERVICE AT WASHINGTON

THE very general efficiency of the public service, especially at Washington, is much greater than those who get their information from partisan sources have ever dreamed. No student of public affairs can spend any time at the Capital without receiving a deep and grateful impression of the excellence of the work done in the Departments. It is doubtful whether the public appreciates the high ability and the special skill of the men who work there; and in almost every Department the courtesy with which the great business of the Government is carried on is noticeable. There is no other such organization in the world; nor is there anywhere else in any one great organization such a large number of men who have developed special skill for their duties. The sheer political pensioner is now seldom encountered anywhere.

Especially noteworthy is the group (or the army) of scientific men in the several great departments that demand the highest training. Among them are many of the foremost authorities in the world in the several fields of scientific work—especially in the divisions of natural history. These are men who by private careers could have reaped for-

tunes while they were reaching eminence; and they give their lives to science for the public welfare in the truest spirit of devotion to a high ideal. The work they do, on small salaries, is making, and in some departments has already made, Washington one of the greatest scientific capitals in the world. Much the same spirit is shown by many men in permanent positions in the several Executive Departments.

Beside the steady work of this kind that has made the National public service the most efficient, perhaps, that any Government ever had, the noise of politics in the Capitol while Congress is in session is a mere passing distraction; and yet it is this noise that we hear and that we too often judge the whole governmental machinery by. This governmental machinery the President knows and appreciates; and whatever he can do to reduce the political part of the public service to the same scientific basis of efficiency will be so much clear gain. His appointments thus far show that his purpose is clear.

HOW TO GET BAD GOVERNMENT SERVICE

THERE is no need at this late day to prove the value of the merit system of appointment to public office. But Mr. William Dudley Foulke, the newly appointed Civil Service Commissioner, has reminded the public of the comparative merit of the patronage system and of the merit system by such striking recent examples that they are worth recalling and remembering.

In the War Department the Spanish War required a sudden and large increase of clerks, who were appointed by the old patronage system, and they were exempt from the civil service rules. More than half of them were found incompetent and were dropped. But during the same period not a clerk that came into the Department through the merit system was dropped after probation.

In the railway mail service in 1899 only one-half of one per cent. of the clerks were dropped after probation; and only three were dropped out of 492 appointments made through the merit system in all the Departments at Washington. But of the Indian agents, who are appointed in the old way, 58 out of 60 were changed during Cleveland's first term; only 8 out of 76 appointed during Harrison's administration served their full terms; during the second Cleveland administration only 4 served out their terms and there were 81 changes; and during McKinley's Presidency there were 79 changes in 58 agencies and only 9 agents served full terms.

Desirable extensions of the merit system of appointment to the civil service are its application to the Census Bureau, especially if it be made a permanent bureau; to the constantly growing list of rural free delivery mail carriers, who number now nearly 6,000; and to the consular service.

THE INCREASING PUSH FOR TRADE RECIPROCITY

THE agitation by American manufacturers for more reciprocity trade treaties becomes more and more earnest. Meetings, small and large, are now held so often that reciprocity dinners may be called the fashion among associations of manufacturers. Many were held during the early fall, all leading up to the convention in Philadelphia. At the annual dinner of the Illinois Manufacturers' Association, at Chicago on October 24, Mr. Kasson, President McKinley's Commissioner to negotiate such treaties, presented their favorable trade-results to us, and declared that "we have come to the parting of the ways. We must go to the left," he said, "on the Spanish road of exclusiveness and industrial stagnation in our home market and for our insular possessions; or go to the right on the smooth highway of reciprocity and industrial expansion."

In spite of the opposition of one body of Protectionist opinion, which holds to high protection with no favors to give or to ask, there is no doubt of the radical change that has taken place, since the rapid rise of our exports, in a much larger body of opinion among manufacturers. Mr. McKinley's very radical change of attitude during the last year of his life reflected the change of the dominant protectionist opinion. Whereas we used to hear "Protection for home industries," we now hear "Encouragement for exports."

That a constantly widening application of reciprocity would logically lead to free trade is true. But so gradual at best will be the practical application of the principle that this possible ultimate effect in no way deters protectionists from favoring reciprocity. They declare, indeed, that it is a logical extension of protection—which also is true.

Considered from a political point of view the subject suggests this interesting reflection —that we are so practical a people that we easily bend our political doctrines to commercial necessities. The important fact is that the American manufacturer wants foreign markets, must have foreign markets, will have foreign markets. Until a few years ago he paid little attention to foreign markets and then he was a strenuous friend of protection against imports. Now it is not imports that trouble him—it is his needs as an exporter. Whether his changing doctrine be merely the extension of his old principle of protection or its abandonment matters little; for happily it is not doctrine that rules either the commercial world or our political action. We grow by facts. If we permit our political formulas to withhold us from reciprocity, we shall discover that they will not protect us from retaliation.

PAN-AMERICAN ACTIVITY AND THE DISAPPEARANCE OF THE MONROE DOCTRINE

IT is significant and interesting that when Lord Pauncefote landed with the new treaty, whereby it is hoped a final agreement about an Isthmian Canal will be reached by the United States and Great Britain, the Pan-American Congress was in session at Mexico; for both the treaty and the Congress make for a larger measure of influence by the United States throughout all the Americas. It is interesting to observe that we have almost ceased to discuss the old Monroe Doctrine (peace to its memory, for it provoked more ponderous dullness than any other political doctrine of the century!), and we have begun to act upon it—not in political ways, but in ways that are very much more important. It is true of nations, as of men, that as soon as they begin to do useful things in the world the doctrines that seemed of great importance in their periods of speculation are well-nigh forgotten.

By closer union with the Central and South American States, by better trade relations, by preparing for the sensible settlement of both political and commercial differences, we are applying the real meaning of the Monroe Doctrine at a pace that would strike its most belligerent upholders dumb. In the meantime discussion of the doctrine has been transferred to the continent of Europe, where the public journals are indulging in much speculation about the possible results of the Pan-American Congress. The capital and the energy of the United States that are furthering the legitimate development of Central and South America, and are building up a mutually profitable trade between all parts of our continent, are a more powerful force in the world than all the assertions of doctrine made since we insisted that no European monarch should gain new territory on the American soil. And European peoples are now not concerning themselves about transplanting monarchical institutions, but only about the extension of their foreign trade. It is a battle of commerce, not of armies, nor of political doctrines.

CLEARING THE WAY FOR AN ISTHMIAN CANAL

THERE is a great public interest in the new American-English treaty about the Isthmian Canal, which it is understood has been agreed upon between the State Department and the English Government, and which will now be laid before the Senate. The English Government was not averse to removing the hindrance that the old Clayton-Bulwer treaty put in the way of complete control of a canal by the United States; but it did not like to end a long contention, as it were, under compulsion. Of the final outcome there can be no doubt. The English have nothing to lose and everything to gain by freely assenting to the American construction and control of a canal. The whole world will gain by it. Moreover, there is no other practical way to get the canal; and there is no other natural way. Geography and our trade expansion have already settled the question. Whatever diplomatic *pourparlers* may yet be formally necessary are mere matters of courtesy and detail.

After the report of the Canal Commission is made on the route and on the cost, there ought to be little delay in taking definite action looking toward its construction. There are difficulties—difficulties of cost, difficulties of opposition by some of the transcontinental railways, difficulties of a lack of faith in the benefits of a canal, and so on. But there was never a gigantic undertaking that had fewer difficulties to contend with than the plan to cut a canal now encounters. It will

come as one result of the push of our commercial expansion and as a monument to American enterprise and energy.

THE POLITICAL CLEANSING OF NEW YORK

NOW and then it happens, and it happens oftener than you may think, that a straightforward moral force does assert itself in politics; and this is what happened at the recent municipal election in New York City. The unfathomable depravity of the Tammany government was rebuked and cut short by electing Mr. Seth Low Mayor and Mr. William Travers Jerome District Attorney by large majorities—this in spite of the fact that New York is an overwhelmingly Democratic city, and in spite of the fact that Mr. Edward M. Shepard, a man of character and high purpose, accepted the Tammany nomination for Mayor and made an appeal for a reformed Democratic party. It was Democrats who elected Mr. Low, the Fusion candidate—Democrats to the number of 100,000 or more who refused to put their national-party creed before the municipal-party need. It was a municipal election, not a national election. It was not a triumph of the Republican party, nor a defeat of the Democratic party. It was an expression of the aroused moral sense of the great city.

Mr. Low is almost as well known as any man in our public life. As the successful Mayor of Brooklyn in his youth, as the successful President of Columbia University for many years, as a man of character and courage, elected now to one of the foremost public places in the world, he comes to his high duty under almost ideal circumstances. He owes his election to no party but to the citizens of New York. He is not a man to misuse the Mayor's place as a self-seeking politician might misuse it. His conception of municipal government is the best conception of the most difficult political theory that we have yet to reduce to general practice—the government of a city independently of national-party politics.

It has been many years since the metropolis was politically so fortunate—with a non-political Mayor, a Governor of the State who does not misuse the State government for the degradation of the city, and a President of the United States who will not entrench a disgraceful local machine behind the powerful Federal patronage here. If the sound principle of municipal government can be permanently applied to New York City, we shall very soon throw off the reproach in most of our other ill-governed municipalities—that the weak place in our democratic system is its inability to govern our cities decently.

The question that is thus hopefully raised is of the foremost importance in our political and social life—Will our greatest city govern itself? Or, is Mr. Low's election the result of a mere spasm of civic virtue to be forgotten when his term expires? Will the professional municipal spoilsmen again come into power after their recent unpredecented debauch shall have become somewhat dim in the public mind?

In smaller cities (Cambridge, Mass., is one such, and there are more) municipal officers have long been elected without reference to national politics; and a permanent organization for straightforward city government—a permanent citizens' party—has been kept alive. If a corresponding result can be worked out in New York, it will go very far towards the establishment of municipal government throughout the land on a sound basis. But Mr. Low cannot himself do this. It must be done by the citizens who elected him. Sound municipal government will, therefore, be on trial in New York for the next two years in a remarkable, interesting, and crucial way.

THE GREAT CHANCES IN POLITICAL LIFE

THERE have been few more striking instances of the quick rise of capable and earnest young men to great prominence in public life than the case of Mr. Jerome, who was elected District Attorney of New York County on November 5th. Six months before the election he was unknown as a national figure, although he was very well known at home. Even a month before the election he had come into wide public notice chiefly by reason of his courageous work in connection with the raiding of gambling houses—a great service to the community, but a service that is not especially dignified. It was the earnestness with which he entered into this method of cleansing the great city that won him the Fusion nomination for the post of District Attorney. His campaign of the city then in less than a month drew the attention of the whole country to him. It was not his oratory, in the common meaning

of the word, that put him at a bound far above the level even of long-distinguished campaign speakers, for he is not an orator of rolling periods and winning voice. It was simply the man's moral earnestness, which is another name for character. By reason of this quality he probably stands out today more conspicuously than any other man that took the stump in November anywhere in the Union; and yet he was a candidate for what is usually rated as a subordinate if useful office. American politics affords as good a chance for brilliant careers as it ever did for men of mettle.

An explanation was recently made of Philadelphia's loss of civic spirit by a writer in *The Atlantic Monthly*, who said that the public service was regarded by too many of the best men of Philadelphia as an unattractive calling for a gentleman. Politics is under a sort of social ban. Banking and the organization and the management of industrial enterprises "stand higher" in the social rating of occupations. There has at times been such a feeling as this in many American communities. A community where it prevails loses something by it, but the social circles that hold such a notion lose more. Whether a man will make a successful public servant is a question of his individual force and character and not a question of the social prominence of his family. Yet it is as important that the men who come of well-known families should take an active part in public life as that public life should appeal also to men of humbler origin; for as soon as any set or section of society scorns the public service it thereby becomes a mere burden to American life. It is an interesting coincidence, therefore, that three citizens of New York who hold, at the present juncture of affairs, three of the most important public positions in the world are Theodore Roosevelt, Seth Low, and William Travers Jerome. Not one of these owes his position or his success to any boss. They owe them rather to the opposition of bosses. Every one of them, too, is in the prime of life, and two of them are hardly passed the period of youth.

THE DOCTRINE OF "ROOM AT THE TOP"

IT hardly follows from the conspicuous success of men like Mr. Roosevelt, Mr. Low, and Mr. Jerome, that every well-equipped man of character and earnestness may win a great success in public life; but it does follow that the chance is good enough to be a continual encouragement. The public service offers careers of the greatest usefulness in less conspicuous positions and of great honor too. It does not offer chances for great financial success—that is to say, it does not offer honest chances. But the noblest work in the world has seldom led to riches.

For that matter great fortunes do not come to all those who seek them directly. Opportunity and even blind luck play their large parts in shaping the careers even of the best equipped and best trained fortune-seekers. When, for instance, Secretary Gage lately told an audience of young business men in Denver that if he knew they were capable he could put twenty-five of them in positions in different parts of the country where they would each earn $25,000 a year—conceivably there may have been twenty-five men in this audience who were capable of filling these lucrative places; but there is no possible method whereby they could prove their capability to Mr. Gage or to the men who can give such opportunities. Wherever such an opportunity presents itself there is likely to be a man on the spot capable of taking advantage of it. On the other hand, too, most men who are capable of earning $25,000 a year sooner or later find the opportunity—not always, but surely often; for part and parcel of such a man's equipment and temper is his knack at finding such a chance.

It is misleading to hold up to young men conspicuously great rewards as so many plums hanging high on a tree which the best climbers may pluck. The world is not so organized. Most of the plums that grow on trees that are already planted belong to the owner of the premises. To cultivate the art of climbing *those* trees, then, leads to many a disappointment and misconception. The man of originality and power plants other trees—or, leaving plums to horticulturists, goes his own way for rewards of another sort.

The doctrine of "room at the top" is true; but it is a sort of misleading truth. The doctrine of good-training, great diligence, a balanced judgment, of the invincible power of character and of well-directed work is the only doctrine worth living by. For the man who accepts this and lives by it Opportunity generally opens its gate; but inside it is not a plum tree of some-

body else's planting that he sees, but the natural results of his own previous labor in a form that this labor itself has determined.

The conclusion of the whole rambling matter is that the world, and our own part of it in particular, offers chances in politics, in the professions, in money-making, in the arts and in the crafts that are found or created every day by strong personalities; and no new social or industrial changes have much effect on the matter. Men have got to do the work of the world whatever form it takes, and the strongest men will do most of it and get most of the rewards, as they have done from the beginning.

NATIONAL PARTY LINES

THE November State elections had practically no significance as regards National polities except that the Republican tide ran high. The Democratic States gave Democratic majorities, the Republican States, large Republican majorities, and there were no great surprises Massachusetts, Ohio, and Iowa gave very large Republican majorities.

Just for the moment the Democratic party may be said hardly to exist in any compact and aggressive form. But it gained a great advantage last year by the emphatic and overwhelming defeat of Mr. Bryan—an advantage that it would not have had if the Republican victory then had been a small one, for now it has a free chance to make a better formulation and personification of its principles than he gave it.

But in the meantime the old party differences have become much less sharply marked. The body of opinion in each party has moved towards the body of opinion in the other in a very remarkable degree. The Republican doctrine of reciprocity is an approach toward the Democratic doctrine of a tariff-for-revenue; and the Democratic position on the currency is constantly approaching the Republican position. Mr. McKinley's Administration made distinctly for a softening of party lines; and Mr. Roosevelt's gives promise of the same tendency.

And a new set of public subjects is coming forward such as the isthmian canal, and reciprocity in trade, about which party lines may not be drawn. The plan for subsidizing ships is more likely than any other plan now on the horizon to provoke party warfare.

But the Democratic party is by no means dead. If it had a great national leader it might at any turn of the political road spring into a very vigorous life by the time of the next national election. Its weakness is the lack of leadership. Mr. Bryan's day, of course, is past for ever. Mr. Shepard probably lost his chance by attempting to gain leadership on a purely municipal opportunity, which was such a mistake of judgment as may offset his high qualities of other kinds. The cloven-foot of bossism shows itself in Mr. Gorman's ambition, as the jocular level of discussion is reached in Mr. Watterson's supposed campaign. There is Judge Gray of Delaware as there was Senator Bayard before him. But no leader that now seems equal to the great opportunity stands out among these or among a larger number that might be named.

The Republican party, rich with leaders and fortunate in its power, is in the unfortunate position of having too nearly everything its own way.

THE TAXATION OF FRANCHISES

IT was a dramatic and almost sensational decision handed down by the Supreme Court of Illinois, whereby the public-service corporations in the State must hereafter be taxed also on the value of their franchises and not as hitherto only on the value of their tangible property. The subject was brought before the court by an agitation begun by two teachers in the public schools of Chicago, Miss Haley and Miss Goggin. They took the matter up because the insufficiency of the school-fund was excused on the ground that the tax-limit had been reached. The decision of the court, which was unanimous and final, compels the Board of Equalization to assess the franchises of corporations at the same ratio of its market value as they assess other property. The result in Chicago alone is that the telephone, electric, gas, and street-car companies must be taxed on about $235,000,000 instead of $33,000,000 as hitherto. There are, of course, other franchises that fall under the decision. But the decision will increase the income of the city of Chicago by about $2,000,000 a year.

But this is not the whole benefit of the decision nor perhaps the most important; for it emphasizes and encourages one of the most pressing tax-reforms that need making in

most of our cities. The general escape of the owners of franchises from the tax-list has greatly encouraged the various doctrines of destruction and of unrest that have played a part in municipal politics and in the lobbies of State Legislatures. We owe to Mr. Roosevelt a plan for such taxation in New York City; and it is a subject of hopeful agitation in several Western States.

WHAT THE COURT OF NAVAL INQUIRY WILL NOT SETTLE

THE naval court of inquiry into Rear-Admiral Schley's conduct during the Spanish War was forced by the angry newspaper controversy about the subject, and he did a right thing when he asked for an inquiry. The immediate provocation, it will be recalled, was the very unjust and improper criticism of his conduct in Maclay's "History of the United States Navy." Although when this is written, what the court's finding will be on the several "precepts" is not known, it has become evident that the whole controversy will be left very nearly where it was before the court was convened. The politicians and the newspapers that have fomented it and continued it have done serious hurt to the navy. The country was very proud of the service three years ago. Today it is very tired of the whole Cuban campaign, and the heroes seem very human, to say the least. The general demoralizing effect of the controversy is extremely regrettable.

The truth remains that there is no braver body of men in the world than the officers and the men of our navy; but this fact is for the moment obscured in the public mind by what the newspapers have erroneously interpreted as a "trial," and the people do not feel the same flush of pride when the navy is mentioned that they felt three years ago. Many naval officers themselves privately speak of the whole matter as a humiliation.

Whatever the court may decide, the testimony, as it is seen by laymen and as the public will interpret it, has disposed of practically every accusation made by the newspapers against everybody concerned. It was said that Rear-Admiral Schley showed cowardice —an absurd accusation that has been disproved. It was said that the records of the Navy Department had been mutilated and changed — an equally absurd declaration. Concerning the real matter of the inquiry, the efficiency of Rear-Admiral Schley, the partisan press and public will not have its mind changed by anything that the court may find. He will remain the hero of a large part of the public; and there is little chance that proper reward, such as was recommended to the Senate by President McKinley, will ever be given to the officers and the men who took part in the battle of Santiago. On the other hand, the greater part of the navy itself, it is perfectly well known, regard Rear-Admiral Schley not as a coward, but as a spectacular officer who plays to the galleries; and in naval annals Rear-Admiral Sampson will always remain the hero of the siege and of the battle. Historians will face these two facts every time they make an investigation into contemporary opinion—the preponderance of naval opinion on one side, the preponderance of lay opinion on the other.

CHINA IN THE REORGANIZATION OF THE WORLD

ALL the soldiers of the Allied Powers, except legation guards, left Peking on September 17, and the keys of the city were turned over to Prince Ching with a splendid ceremony that formally ended occupation by the foreigners. China is again nominally in the hands of the Chinese Government, and the unhappy international episode that began in the summer of last year with the murder of the German Minister is ended.

The upshot of the whole matter is that the Empire is really, by the financial terms of the protocol, in the hands of the Allies. The indemnity of nearly $340,000,000 must be paid in thirty-nine annual instalments, and the interest must be paid semi-annually. An international commission is to receive and to distribute these payments, and the money to meet them will be practically collected, chiefly from customs duties, by the commission. The fiscal system of the Empire, therefore, is in the hands of the "foreign devils"; and this is the net result of the Chinese effort to oust the foreigners. The great province of Manchuria has fallen into Russian hands, as was, perhaps, inevitable in any event.

But what we regard as progress will be greatly accelerated. Trade will begin again and the commercialization of China will go on at a quickened pace. The Western nations

have a greater degree of control than they could have gained in many years by natural and peaceful ways. The reactionary Chinese party has suffered a permanent defeat and the commercial conquest of the Empire will now go forward. There is nothing to give an encouraging hope that China will be able to develop commercial or industrial autonomy. It is not likely to become, as Japan is become, an independent country economically as well as politically. It seems more likely to be ruled forever by the great trading and financial powers of Western civilization.

But the apparently clear demonstration of this fact is a long step in the reorganization of the world as decreed by modern commerce; and, high as the price is that China must pay for its tutelage, it is cheaper than if it had come by a long war. All the incidents of the foreign occupation have, unfortunately, not been creditable to Western civilization. Nor have there been many such pathetic incidents in modern history as the pitiful helplessness of the Chinese. Consider, for instance, the pathetic building, in the place of the gate that was destroyed, of a sham gateway at Peking—like a gateway on the stage of a theatre—for the Court to pass through, so that it might not be reminded on its return of the destruction of the capital! When the Empress dies, either in the course of nature or by violence (and it was reported that assassination was recently attempted), the new order will probably find expression in the Government.

Coincident with the return of the Chinese Government to formal life occurred the death of the greatest man of the Empire. What effect it will have no one can foresee. It is reported, too, that Mr. Wu, the Minister to the United States, who has held his post longer than the Chinese custom is, will be recalled. He maintained a delicate and difficult position with so much tact and good sense that he won our admiration, and in addition to the substantial service that he has rendered to his own country and to ours, he has added more than any other diplomatist of his time to the innocent gayety of nations.

THE MARQUIS ITO ON THE MISSION OF JAPAN

UNLIKE China, Japan has already asserted its independent individuality in a way that has made its coming into the family of nations one of the great historic events of our era. The position and the ambition of the Empire were never before made so plain to American readers as by the authoritative speech delivered in New York by the Marquis Ito during his recent visit. At a dinner given in his honor by Colonel John J. McCook, he set forth with a statesmanlike breadth his country's rise, without the slightest touch of boastfulness. It was as noteworthy and interesting a statement of a nation's position and aims as contemporary literature contains. This, for instance, is at once a profound and noble utterance by the great Japanese statesman:

"But, gentlemen, there is one thing which people in general are not aware of. It is the coming in contact of the two entirely different civilizations. The highly individual civilization of the West is to come in close contact with the most ancient and venerable theocracy of the world, swarming with innumerable millions of human beings, with a civilization almost diametrically opposed to that of the West. It is not the transient contact of conflicting rulers and armies, but it is the contact, and ever increasingly dense contact, of millions with millions in their daily life.

"The great question arises: Is this contact to produce a crash and a lightning, a repetition of events such as have occurred of late in China? Is this contact to be solved satisfactorily to both parties without coming to arms? Shall we be able to solve this problem peacefully if each party does not thoroughly understand and sympathize with the other? And would the two antagonistic forces be able to sympathize with and understand each other without there being somebody to act as mediator between the two?

"Reasoned thus far, I believe I am not saying too much that we are the only people in the Orient who can fully understand the import and significance of the two civilizations and I consider it a noble mission of our country to try to play a part in the future maintenance of the peace of the Orient. I feel it our duty to play an 'honest broker' in the coming contact of diametrically opposed cultures. We have been sometimes described as warlike people, but those who know our history will assure you that since some thousand years we have only three times come in conflict with foreign nations: once when we repelled the army of Kublai Khan, some seven hundred years ago, next when we had war with Corea some three hundred years ago and then for the third time in the last Chinese War.

"The fact that with these exceptions the Empire has been enjoying profound peace with the rest of the world, must be sufficient guarantee of the fact that our mission is that of peace and not

of military glory. We are arming ourselves only to insure the fulfillment of the mission of peace, and the progress we have made thus far, both material and intellectual, would, I hope, justify you in regarding us in the light of friends in the conscientious fulfilment of our destiny."

With appreciative acknowledgment of American friendship and help toward industrial development he recalled the fact that more students are in attendance at Yale University from Japan than from any other foreign country; and the following hints of industrial progress are significant: the Empire had 1,000 miles of railroad in 1889, and 3,600 in 1899; the mail carried increased from 194,000,000 parcels to 636,000,000; the telegrams sent from 3,500,000 to 15,500,000; the miles of telephone wires from 300 to 18,000; the tonnage of the merchant marine from 140,000 to 584,000; and the foreign commerce of the country increased at the same rate.

The visit of the Marquis Ito to the principal capitals of the Western world will emphasize the increasing importance of his country's position and mission and raise the already high esteem in which its statesmanship is held.

BY RAIL ACROSS ASIA

THE official announcement that the great trans-Siberian railway is "practically" complete stirs the imagination; for it is now possible for the first time to go by rail entirely across Europe and Asia as it has long been possible to go by rail across our continent. A man may travel around the world by a direct railway journey across each great continent and by a direct voyage across each great ocean.

The trans-Siberian railway was a military conception—a military necessity—in fact, for Russia; but it is likely that its military use will be its smallest service. It opens the great stretches of Siberia, with its riches of grain and minerals; and it gives a new world to the Russian farmer and miner. Its industrial benefits will be enormous. There has been a tide of eastward immigration since the road was begun comparable only to the tide of westward immigration that filled our western area. It is not so freely open to all the world because Russian rule is not so attractive to other peoples as American freedom; but it brings a widening life to the millions of Russia itself; and it is, therefore, an important and world-wide economic influence.

This 5,542 miles of road, built at a cost of 390 millions of dollars, is not yet such a transcontinental artery as our great thoroughfares. Much of it has been ill-built; much of it is yet unfinished. But it is open, except for a short distance; and Asia has a hoop of steel which binds the whole world together in a way that it never was bound together before.

THE NEGROES INCREASE AS FAST AS THE WHITES

THE tabulation of the census returns has now made comparison possible of the rates of increase of the white and of the Negro population over a half-century. In 1860 the Negro population was 4,500,000, in 1900 it was nearly 9,000,000; the white, 27,000,000 in 1860 and nearly 67,000,000 in 1900. This shows an increase of the Negroes in forty years of 100 per cent., and of the whites of about 150 per cent.; but the whites increased 14,000,000 by immigration and the Negroes practically not at all. The natural increase of the races, then, has been at about the same rate for forty years. This is shown also by comparing the census returns of 1880 and 1900. During these twenty years the whites increased, by births (excluding immigration) nearly thirty-three per cent.; and the Negroes nearly thirty-four per cent.

Taken by single decades the rate of increase is not so accurately shown, because of the defective enumeration, especially in the South, in 1870 and in 1890.*

The proportion of the blacks to the whole population remains practically stationary—nearly twelve per cent.; 8,000,000 out of the 9,000,000 of them live in the Southern States, and there has been no very considerable migration of them from the South. The movement into certain Northern States during the last decade—which is chiefly a movement to a few large cities—shows an appreciable rise of the Negro population of those cities when it is stated in percentages; but the movement northward is relatively so small in

*Census	White	Increase	Immigration	Natural increase	Percentage of natural increase	Negro Population	Increase	Percentage of increase
1860	26,922,537					4,441,830		
1870	33,589,377	6,666,840	2,314,824	4,352,016	16.16	4,880,009	438,179	9.86
1880	43,402,970	9,813,593	2,812,191	7,001,402	20.84	6,580,793	1,700,784	34.85
1890	54,983,890	11,580,920	5,246,613	6,334 307	14.59	7,470,040	889,247	13.51
1900	66,590,725	11,606,835	3,687,564	7,919,271	14.44	8,803,535	1,333,495	17.85

comparison with the increase in the South that it may practically be ignored so far as it affects the whole Negro population. The relative proportion of whites and blacks in all the old Southern States remains practically the same. In South Carolina and in Mississippi the blacks constitute fifty-nine per cent. of the whole population.

It is probable that in the next four or five decades the colored population will increase at a somewhat more rapid rate than the white by births; for the infant mortality becomes less rather than greater, because more of them are now learning something about the laws of health.

It is not likely that the sensational conclusions which statisticians and theorists of many sorts have at times reached will ever again play any part in the discussion of the Negro's future—such, for example, as these —that they would soon die out; that they were increasing so fast that they would soon drive the whites from the South; that they would migrate; that they could be deported, or even that they could be scattered over the Union. They will remain where they are for as long a period as can be foreseen, and as they are, except as well directed efforts to train them gradually lift them to a higher plane of efficiency. In the meantime education of the right kind of the ignorant of both races in the South is the most pressing duty that confronts patriotism and philanthropy.

A "PROBLEM" THAT THRIVES ON TALK

THERE can hardly be a doubt that the two races in the South have drawn further apart during the last ten years than they were before, and that there has been a certain increase of race-sensitiveness due to the disfranchising amendments to the constitutions of several States. President Councill, a colored man who is at the head of the Agricultural and Mechanical College at Normal, Ala., has declared that "it requires no great astuteness or wisdom to see clearly that the white South has determined two things which it will support with its life blood: to resist all attempts at social admixture of the races, whether by legal enactment or social sufferance, and to rule in all political affairs with the ballot or the bullet."

The admixture of the races goes on, but the weight of testimony is that it is decreasing. Violence is, unhappily, not apparently decreasing. Lynchings and burnings continue, and a recent race-riot in Louisiana caused the loss of more lives than had been sacrificed in such a way for many years.

But the patient student of the race-problem is not seriously discouraged, even by these events. They are the result of old forces that have long been at work and that have their origin far back. One must not measure the speed of an army's march by the gait of the stragglers at the rear. There is nothing more certain than the gradual victory that white men and black men of the broader type are winning over the retrogressive tendency of ignorance in both races. Industrial development and work for universal useful training are going on in greater volume and with greater earnestness than ever before. Well-being and right thinking have a wider sway today over the South than they had yesterday or on any day since slavery got its firm foothold there. An increasing number of the best men of either race are not conscious of any race-problem in their daily lives and work; and it is one of that group of "problems" that becomes more serious and stubborn the more it is discussed. A little good work goes further in this world than very much loud talk.

MILLIONS OF DOLLARS FOR THE TRAINING OF MEN

THE prosperity of the country and the well-directed work of men of wealth continue to be shown by munificent gifts to public education in its largest sense. By the will of the late Jacob S. Rogers, the maker of locomotives, $5,000,000 will be put at the service of the Metropolitan Museum of Art in New York, as he intended; for the controversy about his will has been settled. The time is fast coming when the two great museums of New York, the Museum of Art and the Museum of Natural History, will be among the most helpful and noteworthy educational institutions in the world; and these with the great new free library, which the public owes to the Astors, to Lenox, and to Tilden, with its branches which it will owe to Mr. Carnegie, will in time do much to change the intellectual character and habits of the metropolis. For, although there are many students and persons of the highest cultivation in the city, the dominant characteristic of

New York life has never been the devotion of its people to any art—except the art of fortune-building. Every great institution which encourages and emphasizes study—whether of the fine arts, of literature, or of the natural sciences—has its influence on the whole population and in an indirect way on the whole country.

Mr. J. D. Rockefeller has made a gift to the endowment fund of Barnard College for women, of $200,000, on the condition that an equal sum be secured by the trustees. Mr. Carnegie has given $100,000 for a library at San Juan, Porto Rico; and the plans for a great Trade School at Pittsburg, to which it is said he will give an endowment of $25,000,000, besides $5,000,000 or more for buildings are soon to be presented. A commission of well-informed men is making a special study to determine the best character and scope of such a school. The friends of Yale University, too, were successful in securing the fund of $2,000,000 which they set out to collect by the time of the bi-centennial celebration. By the erection of new buildings both Yale and Harvard have been, in a sense, remade within the last two years. The amount of money that goes to the development and to the maintenance of educational work—most of it popular education—in the United States, is without parallel in the history of the world. Yet no institution has as much as it needs and not a few of the best ones are seriously hampered in many departments; for departments and plans are multiplied faster than support is given.

In that field of educational work, too, where well-directed financial help is more needed than in any other part of the country—the field of popular education in the Southern States—local taxation is increasing and benefactions are constantly made to it—in less conspicuously large sums, it is true, than to the great museums and the older institutions of other parts of the country, yet in a more or less steady stream. The annual meetings of the boards of trustees of the Peabody and Slater funds have just been held, and the report made public of their secretary and agent of distribution, Dr. J. L. M. Curry, who has won the distinction of giving an impetus and encouragement to popular education that can be compared perhaps to the work of no single person since Horace Mann. These funds for Southern education are perhaps the best-directed philanthropies (for they make for self-help) in the whole history of American benefactions. There is a practically boundless field and a crying need for their duplication by other men of fortune and of profound faith in democratic institutions.

These cheerful facts all make for the chief aim of a democracy which is so simple that we forget it when we construct great social philosophies. It is this—not only to train some men, but to train every man and every woman over whom our flag floats. We have no wealth and no opportunity and no duty that are for a moment comparable to the wealth and the opportunity that efficient universal education gives; and no other duty confronts us that is half so important. When our great reservoirs of riches flow out in these channels to make the whole population more efficient, the country is not only safe, but it is mighty lucky to boot.

THE SOUTHERN EDUCATION BOARD—A NEW PATRIOTIC FORCE

A NEW and strong force has just been definitely organized to further a general patriotic interest in Southern public-school education of each race alike. Out of the Southern Educational Conferences, that have for several years been held between Southern and Northern men who regard the education of the masses as the first duty of our time, has grown an organization that has now formulated a definite plan of work. The board of this Educational Conference consists of both Southern and Northern members, the president being Robert C. Ogden, Esq., of New York, whose zeal has found helpful and graceful expression in many acts of direct aid and in the most generous hospitality to earnest workers for this cause.

The organized field-work of this board, to collect accurate information and to build up a sound public school system in the South, is in the hands of President Charles W. Dabney, of the University of Tennessee, President Edwin A. Alderman, of Tulane University, New Orleans, President Charles D. McIver, of the (N. C.) State Normal and Industrial College for Women at Greensboro—Southern men of continental breadth of thought who are among the most useful citizens of the Republic—and Dr. Frissell, the

principal of Hampton Institute in Virginia; and these will carry on their work in close touch with Dr. Curry, the general agent of the Slater and Peabody Boards. Associated with them are other men of like temper and zeal, who regard universal Southern education as the most important patriotic duty of this generation. The function of this board of a wholly voluntary association of Southern and Northern men is not to give financial help to any institution, for it is prohibited by its fundamental resolution to do this. But its task will be to collect accurate information, to disseminate it and to build up public opinion to a greater earnestness.

The one great structural error made by the Fathers in the building of the Nation was the permission of slavery. In our time this error shows itself in the mass of Southern illiteracy. It is on the South that this burden falls, although there is not a man now living in the South or elsewhere who was originally responsible for it. It is the misfortune of our common country, the one serious menace to our homogeneity of citizenship and to the common aim of American life. The neglected white children of the Southern States—particularly in rural communities—are of the best English and Scotch stock, and they are as capable as the children of our race in any part of the world. They will not contribute their share to the industrial and intellectual and social wealth of the nation unless they are trained. The Negro children, too, who are pathetically eager to learn, can be saved from a low level of inefficient life in no other way. We hear much about Southern natural resources and Southern industrial development, which is taking long strides; but there is more potential wealth in the untrained hands and minds of the forgotten masses than in all the forests and mines and wells and rivers of every Southern State.

The time of sectionalism surely is past. Past, too, is the time of the pious missionary whose zeal outran his discretion; past the era of misunderstanding and of misdirected effort; and long past is any care for this creed or that in social or in political action, if only men may grow to their full stature under free government. And now the time is come when Southern and Northern men unite, very largely under Southern leadership, to remove this burden of ignorance for patriotic reasons.

This voluntary movement growing out of the Southern Educational Conferences is of happy augury because it is free from fads and all odor of "professional" reforms, free from all manner of cant and beggary. It makes no appeal for support; it preaches no sermons; it sends no foreign missionaries; it stands for no particular pedagogical doctrine or method; it holds no religious or political creed; it is simply patriotic. Its aim is to encourage the proper free training of every child in the South; and it is interested in the South only because public education there lags farthest behind. Why, more gate money is frequently collected at a great intercollegiate football game than has been spent on the public schools in many a Southern county for ten years; and teachers in many communities receive less money than the men who pestle stones in the street.

THE AMERICAN "AUDACITY AND MARVELOUS ORGANIZATION"

FROM every important industrial country and from several which mean to become important, as Japan, there have been coming lately to our land men sent either by their Governments or by organizations to study our methods of manufacture, of transportation, and of organization. The Germans and the English and the French have such men here now; and they are heartily welcomed wherever they go in the United States. It is not by secret processes nor by any peculiar methods which we care to conceal that the American manufacturer has become efficient in producing his wares swiftly and cheaply. It is by his unsurpassed application of machinery to processes that are yet in most other countries done by hand. By "machinery" is meant more than mechanical work; for the whole organization of American industry may be said to be conducted by machinery.

"We can make as good a shoe as you make," said an English manufacturer to a New England manufacturer the other day; "but what fairly takes my breath away is the speed of your machines!"

"Why do you not gear your machines to a swifter speed?"

"We don't know how; and we don't dare to. We should have a strike in an hour if we so increased our output."

The most interesting tribute to American

LOOKING SOUTH-EAST OVER THE BAY

THE REBUILDING OF NEW YORK

MAKING A NEW CITY OF STEEL FOUNDED UPON A ROCK—THE GREATEST SUBWAY IN THE WORLD, BRIDGES, TUNNELS, RESERVOIRS, PARKS, PIERS, BOULEVARDS AND SKY-SCRAPING OFFICE BUILDINGS AND VAST APARTMENT HOUSES THAT ACCOMMODATE INDIVIDUAL CITIES OF PEOPLE—NEW YORK TO BE THE MOST CONVENIENT CITY IN THE WORLD

BY

M. G. CUNNIFF AND ARTHUR GOODRICH

Illustrated from photographs by Arthur Hewitt

A LITTLE sunny-haired girl was looking through the dingy window pane of a down-town surface car in New York. On every side buildings were being torn down and the ugly framework of new structures was going up. Thirty-fourth Street stood up like a ridge out of a great hole of excavations. The sharp, wedge-shaped old buildings at the corner of Twenty-third Street and Fifth Avenue were gone and at Union Square a line of granite blocks and wooden bridges marked the deep path of a great underground tunnel. The dinning of hammers, the shouts of the men, the rumbling report of a blast, the wheezing of drills, and the litter and obstruction everywhere gave the impression of a great quarry and a mammoth workshop.

"I hope it will be a real nice city when it's all done," said the little girl.

Such is the impression that New York just now makes on anybody—a torn-up place, a city in process of complete rebuilding. A few years ago it seemed to be well nigh completely built, and was, as cities go, well made, convenient and not wholly ugly. Long lines of low business blocks down-town tapered off to the hotels and homes of the upper dis-

THE RIVER IN WINTER

Before the new East River Bridge was built

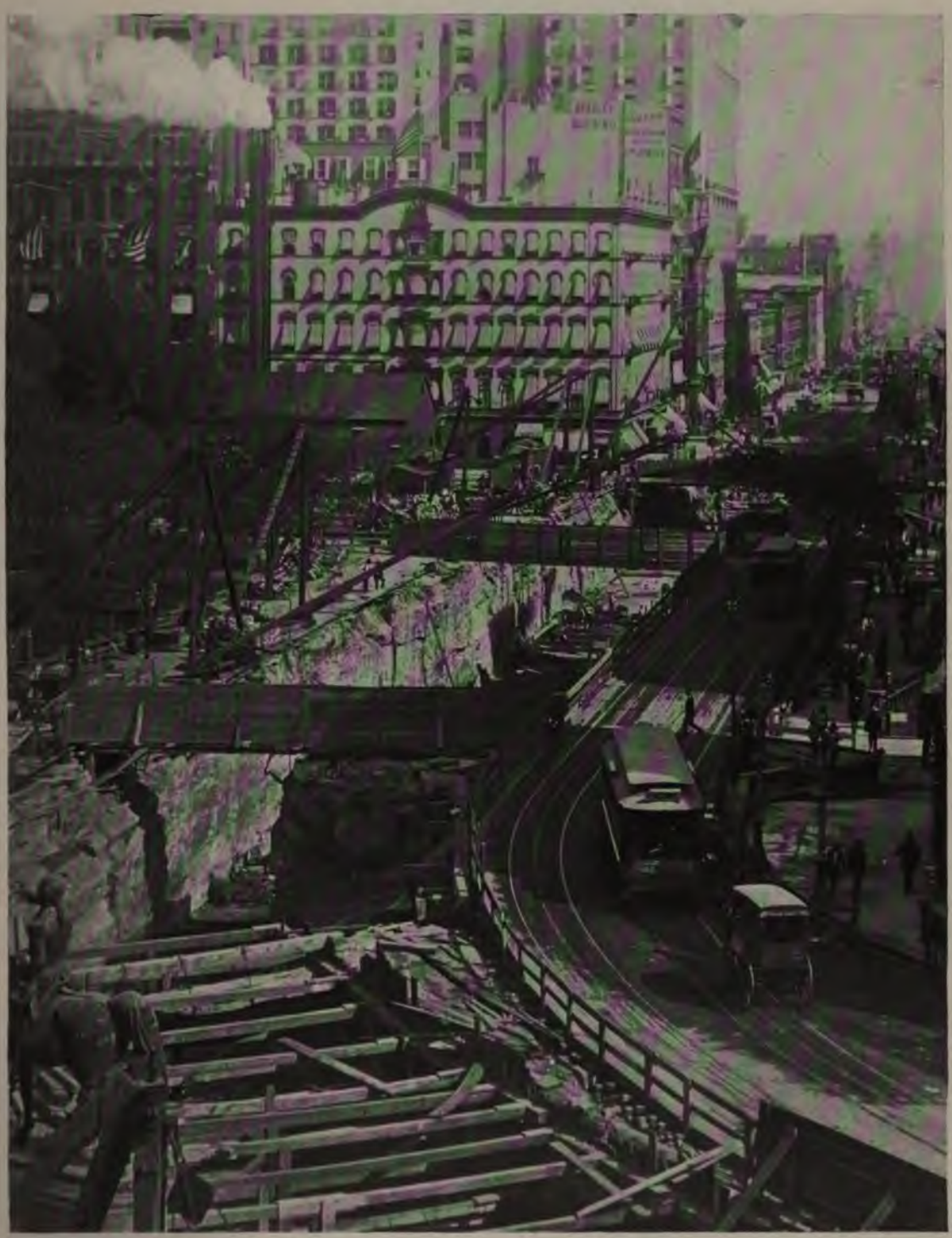
LOOKING UP HERALD SQUARE
Thirty-fourth Street stood up like a ridge out of a great hole

CITY HALL AND PARK ROW
Showing the loop of the Subway

trict. Down the streets ran a vast network of electric cars, cable cars, horse cars, elevated trains and stages in a system planned to meet the needs of generations to come. Across the river hung the big Brooklyn Bridge, and plying back and forth numberless ferries carried vast crowds from home to business and back again. Meanwhile the city unconsciously developed, like the dragon in the story, which, at the last, could scarcely squeeze itself into its own cavern. Then came the period of structural steel, when it became possible, and in New York profitable, to raise buildings twenty or thirty stories high—the era of the "sky-scraper."

Without preconcerted action began the tearing down of old New York. Brick and timber and stone filled the streets along with the big steel girders for the new constructions. This went on up-town and down-town till there is a wide line of desolation and destruction from the Battery to the Bronx. It is as if a cyclone had expended its force upon the city or as if a hostile fleet had bombarded the island. But rising out of the devastation here and there is the ugly framework which presages the newer city, built of steel and concrete upon a rock,

A BIT OF SUBWAY CONSTRUCTION
At Forty-second Street. The Grand Central station beyond.



THE SUBWAY AT UNION SQUARE

View up Fourth Avenue, showing the cut made through solid rock, the temporary street railway and the wooden bridges

PANORAMIC VIEW OVERLOOKING THE EAST RIVER, SHOWING THE BROOKLYN

artificial stone, when no real stone is there. Monstrous office-buildings with thirty stories above ground and with five stories beneath the street level, each accommodating more busy people than all the main streets of many an inland town, fill the lower end of the island,

THE BROOKLYN BRIDGE AT NIGHT

Photograph taken with half an hour exposure in a fog so thick that Mr. Hewitt could not see the bridge. The lines of light mark the course of passing boats

BRIDGE, AND, IN THE DISTANCE, THE NEW EAST RIVER BRIDGE

their unwieldy tops standing up like distorted church steeples out of the cluster of older blocks. Up-town, vast apartment structures spread out over acres of ground and, rising fifteen or twenty stories, house individual cities of people. Down through the city from end to end, digging and blasting and drilling, thousands of men are building the greatest subway in the world, which will cost more than $50,000,000, cutting through rock, mining underground and throwing havoc to right and to left all along its course. Stretching out across the East River is the new bridge—larger than the older Brooklyn Bridge—which will cost $15,000,000. It is only one of several which are projected. Up at Jerome Park a new reservoir which will cost $15,000,000 is being hurried to completion and farther out is the growing Cornell Dam. New piers are being built all along the water front for the foreign trade which is only just beginning and of which New York will be the central port. Small parks are being made to give the concentrated population of the lower districts breathing space. A speedway and boulevards are furnishing open roadways to replace the truck-crowded main thoroughfares. The new Bronx Park indicates a general expansion of taste.

BENEATH THE NEW EAST RIVER BRIDGE

PANORAMIC VIEW LOOKING UP BROADWAY OVER BOWLING GREEN. THE

Down in the narrow south end of Manhattan below Fourteenth Street is crowded the day's work of thousands whose homes are across the Hudson in New Jersey, across the East River on Long Island, across the Harlem River in the Bronx, on Staten Island, along the shore of the Sound and the Hudson and in the seven miles or more of island above Fourteenth Street. Every morning the tide of workers flows down the long city streets or over miles of mainland and across rivers to the business district. At night the tide ebbs back. The concentrated newer city must be built primarily for convenience, and the vaster engineering tasks under way are those designed to facilitate transportation.

The new Subway is the most tremendous undertaking of the kind ever attempted. The Boston Subway seemed wonderful, but compared with this new engineering feat it is insignificant. The New York Subway will run through twenty-four miles of some of the busiest streets in the world; it will burrow through hills; it will tunnel under rivers; it will emerge to send its tracks out upon elevated viaducts; it will connect with steam roads which stand ready to take up the relay.

Starting in the heart of Brooklyn, third-rail

COLUMBUS CIRCLE

IRON WORK IN THE FOREGROUND IS FOR THE NEW CUSTOM HOUSE

electric cars will shoot at fifteen miles an hour or more under the East River and up Manhattan Island almost to the city limits of New York. The route is Y-shaped—some cars will diverge at 104th Street for the great Bronx Park, far to the northeast; others will follow the branch that runs straight north to the Harlem Ship Canal at Kingsbridge. Meanwhile, up and down the stem of the Y, through the busiest part of Manhattan will fly expresses as fast as thirty-five miles an hour. Beneath the river, under roaring metropolitan thoroughfares, out into the open on lofty viaducts, the cars will hurry passengers to meet the Long Island Railroad in Brooklyn, the New York Central at Forty-second Street, or perhaps the projected New York and Portchester or some similar road, planned to carry them to the Connecticut State line. By 1904, a worker at the crowded lower end of Manhattan Island will be able to reach a distant home with speed and comfort. The "rush hour" will no longer have its former terrors.

The people of New York city, too, own the system; for it is the city that is building the Subway. The Board of Rapid Transit Commissioners, appointed in 1894, after draw-

THE ELEVATED ROAD AND THE SUBWAY CONSTRUCTION AT COLUMBUS AVENUE AND BROADWAY

LOOKING DOWN LOWER BROADWAY

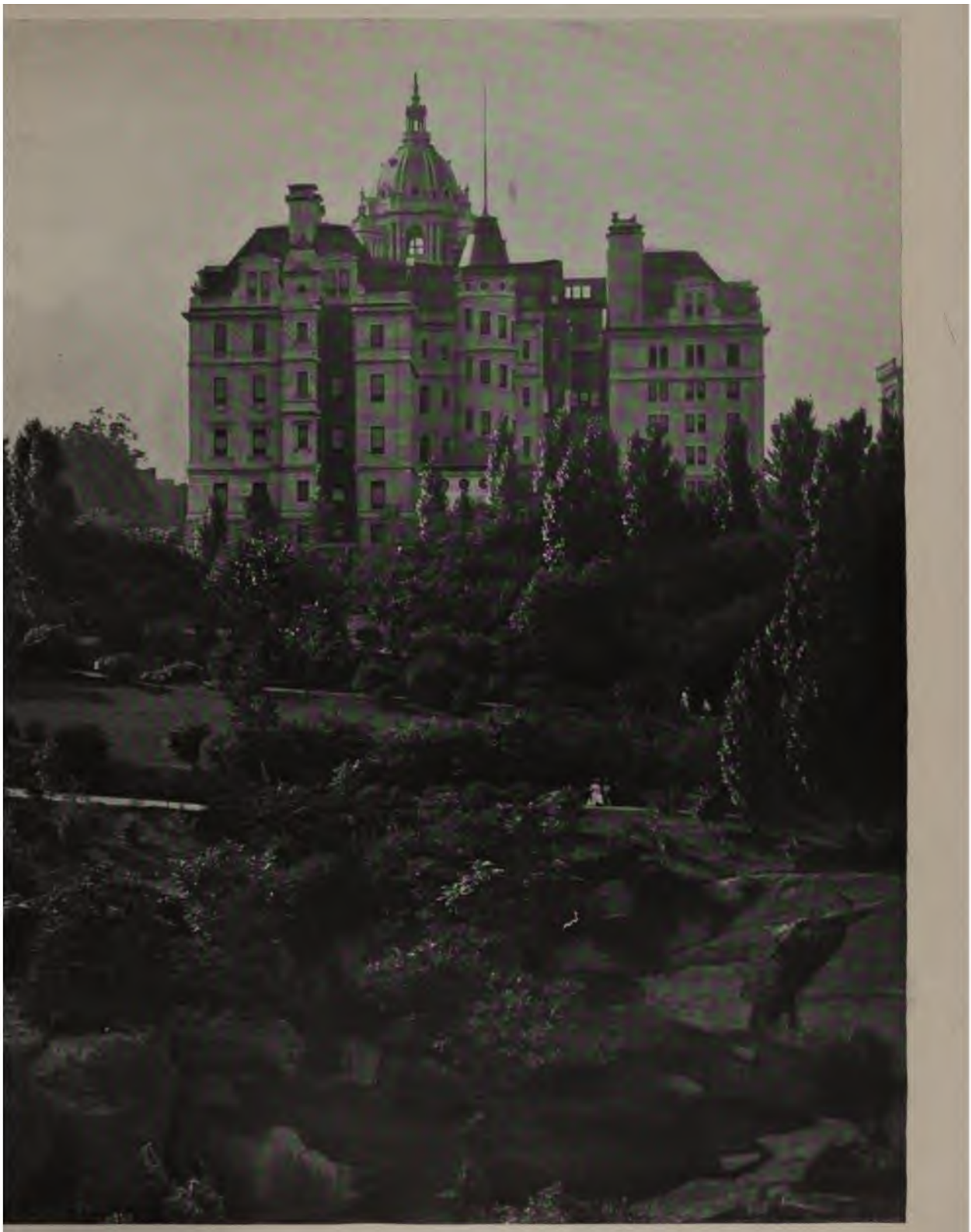
The streaks of light where the side streets cross Broadway add to the canyon-like effect of the thoroughfare

ing up plans—the work of William Barclay Parsons, chief engineer, with George S. Rice as assistant engineer, and a corps of subordinates—accepted the bid of Contractor J. B. McDonald and began the work under a most advantageous arrangement. The city by the sale of bonds pays the Rapid Transit Construction Company thirty-five million dollars for building the Subway and the necessary tunnels and viaducts north of the City Hall loop. The company gives the city a bond. Subcontractors do the work. It is costing nearly a million a month. When the Subway is finished, the company will equip it and run it for fifty years, gradually repaying the thirty-five millions advanced by the city; and then the city, paying a fair price for equipment, will take over the property. The section south of City Hall, including the tunnel, will be similarly arranged for. The credit for the thorough organization and the rapid consummation of the project belongs chiefly to Mr. Abram S. Hewitt, Mr. Alexander E. Orr, and their associates of the Rapid Transit Commission.

Since March 24, 1900, the actual work has been up-turning the whole city. In some places temporary surface-car lines have been built, as at Union Square, to allow the blasting of a veritable canyon beneath; on almost every section of the work bridges for cars hang over great bustling chasms, all thunderous with the din of labor; up-town are mines running down so deep that a fatal avalanche in the tunnel at the bottom left no traces at the surface. Beneath a corner of Central Park another tunnel is daily boring its way through solid rock; in another place the Subway dives well under the present Park Avenue Subway, to be undermined shortly by the tunnel from Long Island City yet farther down—a honeycomb of tunnels, a new New York underground. In one place piers for a viaduct now wait for the iron superstructure at a valley so deep that the true Subway emerges on both sides far up the hill. At the Harlem River work has recently begun on a tunnel so close to the river bottom that an entirely new engineering feat will be attempted—the construction of a river tunnel

"VAST APARTMENT STRUCTURES SPREAD OUT OVER ACRES OF GROUND"

ST. JOHN'S CATHEDRAL ARCH
MORNINGSIDE PARK IN THE FOREGROUND. C



ST. LUKE'S HOSPITAL

UNIVERSITY IS TWO BLOCKS TO THE RIGHT

ALONG THE WHARVES OF THE LOWER CITY
Looking north from Staten Island

by caissons from above. At a Broadway corner the Subway route shaved so close to a gigantic statue of Columbus that the figure required the support of iron beams. But in the main the work has been done by the "cut and cover" method: the workmen dig or blast a great trench, drift out to one side, and then erect the steel beams and pour the concrete that are swiftly transforming a great unsightly gash to a neat rectangular tunnel, trim and snug—not unlike the Subway below the malls of Boston Common.

Nor will there be in the completed underground avenue the stained walls and the damp air that other tunnels know. The long rectangular box is not only floored in alternate layers of concrete and waterproofing but walled and roofed with the same impervious material, and because it cannot leak it needs no other ventilation—in this it is unique—than will be supplied by the shuttle-like rush of a thousand buzzing cars. Outside the walls and on the roof is the maze of water, gas, and sewer pipes once in the roadway. By no means the least engineering feat of the sub-contractors has been the hanging, and bracing, and final disposing of them. Engineers came from afar to watch successful attempts

LOOKING UP THE EAST RIVER
Giving an idea of the vast amount of shipping below the Brooklyn Bridge

LOOKING NORTH ON BROAD STREET

Showing building operations in middle distance

TWENTY-THIRD STREET AND MADISON SQUARE

at blasting rock from under pipes which were to remain undisturbed; it had never been done before.

Indeed, throughout the construction the most advanced methods have been employed; they have been insisted on in the contracts.

Compressed air has been used to an extent never before approached on a piece of engineering. Compressed air-engines do the hoisting; compressed air-drills do the drilling, and with their exhaust furnish ventilation for the underground stretches. A compressed air self-propelling crane snatches the broken

THE ANSONIA APARTMENT HOUSE

THE MUSEUM OF NATURAL HISTORY

LOOKING WEST ON FORTY-SECOND STREET

Hotel Manhattan on the right. One side of the street is torn up for Subway construction

COLUMBIA UNIVERSITY
A corner of the campus

PALM HOUSES
In the Botanical Gardens, Bronx Park

rock out of the Central Park tunnel with unprecedented swiftness. Compressed air hammers drive the rivets of the steel beams. Compressed air sprays the oil into the oil forges in which the rivets are heated, and compressed air does the pumping. Electricity is used to light the work and also in two or three places to drive a traveling crane, which slides along a cable under control of a man swung aloft in a chair. Everywhere the work

ZOOLOGICAL GARDENS, SHOWING THE AVIARY, BRONX PARK

IN BRONX PARK

Showing the Lorillard Mansion

THE NEW RIVERSIDE VIADUCT
Grant's Tomb in the far distance

is rushed. Even hurrying business men stop at the sound of the roaring from the novel forges, to watch the beater peer with shaded eyes into the hot oil fire while he heats a rivet. Heated, the rivet by a deft twirl of the long pincers is tossed to the hammer man, who, catching it in a tin pail or a wooden keg, swiftly fits it into its hole: the helper jams the dolly-bar under it, and then the hammer man gently places his air-hammer

THE MEMORIAL ARCH, PROSPECT PARK

COLUMBIA COLLEGE: THE NEW LIBRARY

over the glowing end. He touches the spring, the hammer raps with the speed of an eager woodpecker, and the rivet is snugly in place: there is no sledging, no sweating, very little noise. With like rapidity all branches of the work go on.

Upon completion the interior of the Subway will be painted a whitish shade and at stations—which when possible will be roofed with glass—finished after the manner of the Boston Subway in tiles. The rails, running between the steel posts supporting the roof, will be another daring experiment. There will be no ties. Wooden beams placed end to end will run along the floor, sunk in the concrete, and on these, also sunk in concrete, will rest the rails. The lights, which will be of a new pattern, will throw no glare in the motorman's eyes.

When the equipment is installed the express trains will run between the City Hall and Harlem on the inside tracks with "island" platforms at the stations. The local trains will use the outside tracks. The expresses will stop at Fourteenth Street, the Grand Central Station, Seventy-second Street, and 157th Street; the locals will stop at stations

A SECTION OF THE RIVERSIDE VIADUCT

THE NEW CROTON DAM

The spillway in the foreground

from five to nine blocks apart. No subway system is ideal: it is never pleasant to travel underground. But this tunnel will come nearer to the ideal than anything thus far built. It will be a triumph of civic enterprise and of bold engineering.

Yet the Subway is but a link in a vast transportation scheme. Not only will a Staten Island tunnel to Brooklyn and a Hudson River bridge or tunnel be built when capital is ready, but work is now going forward on a tunnel from Long Island City, a cantilever bridge, not far from the tunnel, across Blackwell's Island, and a third suspension bridge to Brooklyn, as well as the second Brooklyn suspension bridge whose gray steel towers already support a temporary footway. Of all these thoroughfares, moreover, radiating spokewise from the busy Manhattan workshop, only the tunnel is due to private enterprise; the three bridges will stand as creations of a public commission and the Bridge Department of the City of New York.

The "new bridge," so called, officially known as No. 2, is most in the public eye; it ranks with the Subway as a spectacular feature in the city's incompleteness. Ferry passengers crane their necks at the spidery structure; and from the old bridge Brooklynites gaze morning and evening over to the scrambling figures at work on it. Completed, it will be to most bridges of its length as the flat side of a plank to the edge—its claim to distinction is its width. There are bridges longer, though from anchorage to anchorage it measures nearly 2,800 feet; there are bridges higher, though it rises 335 feet, and a mast 134 feet high could clear its main span by a foot; there are longer spans, though it springs 1,600 feet from tower to tower; but there is no other long bridge so wide—118 feet. Across a double-decked structure will pass on the upper deck two streams of foot passengers and two files of bicycle riders and on the lower, two processions of wagons and six strings of cars, two elevated and four electric. The four lines of electric cars, requiring two loops at the Manhattan end, will balance the structure and evenly distribute the load: on the old bridge during rush hours one side of the structure is weighed down by a line of heavily loaded cars, while a similar line of "empties" runs along the other.

In building, heavy caissons were floated into the scouring East River tideway and sunk with tons and tons of concrete, the steel-shod caisson edges biting deep into the mud. Water-tight cribs surmounted them. Then there on the bottom, going deeper and deeper toward bed-rock, the laborers toiled in the thick air inside the air-lock with the clack of the air-pump always in their ears. By the time the shifts had shortened to a gasping, sweating hour and a half, the men had reached the bottom. The concrete bed was rammed into place and then stone by stone the masonry piers rose until they stood high above the highest flood tides of the river. Piece by piece the skeleton towers went up as the derricks on the wooden scaffolding swung the steel to the riveters. There was seen twentieth century bridge-building. The stresses of the old bridge push and pull and twist on solid stone, but in the new are strips of steel where strains will come and empty air between. The towers are cobwebby as compared with the older granite arches, but strong with the proverbial strength of iron bands. The bridge will give and take until it "finds itself," but there will be no breaking of suspender rods.

Meanwhile, as the piers and towers went up, the masonry and concrete cable anchorages on the two shores were building. With ends encased in enormous beds of granite weighing 100,000 tons and mortared to the bed-rock, four cables, which are not yet in place, will support the weight of the bridge. The cables contain, each, seven thousand parallel wires—the largest and best of their length ever made. Together they will support twenty thousand tons, though a fourth of that weight is all they will ever be called upon to maintain; the strength of one cable, in other words, bears up the bridge—the other three cables represent the margin of safety. Moreover, swung though it is on cables, the bridge will be a marvel of stiffness. From end to end will stretch stiffening trusses forty feet deep. In essence the structure will not be a floor hung on cables, but a long rectangular skeleton box so hung. It will furnish a firm, safe avenue over forty feet wider than the present Brooklyn Bridge, and from the end of its approach in Manhattan to the Brooklyn end over a mile and a half in length.

Even as the temporary structure stands today it is possible to comprehend its magnitude. A glance back from the top of the Brooklyn anchorage, where the anchors already lie, shows Brooklyn as well as Manhattan in the throes of rebuilding—a long latticelike construction glistening in new gray paint runs far along a devastated strip of land encumbered with material. Then a clamber over obstructions brings one to the footway. Up, up, up, with shoes slipping on the cleats nailed across the flimsy walk, one pantingly climbs the narrow pathway till the ships at the dock below are fearfully far away and the ascent is almost perpendicular. The tower top with its great iron cable saddles and its welcome parapet give opportunity for a glance straight down, so far that a cigar end flung out becomes almost invisible before it reaches the river. Then down the long slope to the middle, always fearing that those tall masts coming nearer will strike the frail cat's cradle. A few minutes to watch the nonchalant workmen bustling about; then up the steep again to the New York tower. There again is torn-up New York below; away off beyond the anchorage stretch nine blocks of bare dirt heaps, where once were tenement rookeries. Only a solitary saloon is standing in that bare desert chiseled out of the city. All that is left of the little church that stood in the pathway of the bridge approach is a dilapidated wall and a rose window. A quick but wary scramble down the last steep—and a crossing has been made from shore to shore that will be made two years from now by tens of thousands every day. Even the temporary footway is a notable structure.

Begun under the New East River Bridge Commission, the bridge passes now when half completed to the care of the city Bridge Department, in whose charge are the other new bridges just beginning. Engineer L. L. Buck made the plans and is supervising the erection. The work began in October, 1896, and will be finished by the end of 1903, in half the time required to build the old bridge. As on the Subway, so on the bridge—the watchword has been "speed." Christmas, two years hence, will see them both completed.

The two other bridges already begun—No. 3 and No. 4—are under the supervision of Engineer R. S. Buck, of the Bridge Department. No. 3 will cross the East River just above the old bridge. No. 4 will have its piers on Blackwell's Island. Both will offer accommodations similar to those of the "new" bridge, but whereas No. 3 is a suspension bridge, a few feet wider and, including approaches, a quarter of a mile longer, No. 4 is a cantilever structure, a trifle smaller. No. 2 is costing fifteen millions; No. 3 will cost sixteen; No. 4 but twelve and a half. No. 3 will reinforce the old bridge and the new; No. 4 will serve the Long Island districts farther up the river.

Close to the fourth bridge private capital is competing with public capital in the great transformation. The engineering firm of Jacobs & Davis, who built the gas tunnel under the East River, have begun for the Long Island Railroad a two-tube steel tunnel that will rush the passengers of the Long Island trains from the present terminal in Long Island City beneath the river and well below Thirty-third Street to connections with the Subway and on to Herald Square. Electric cars and swift elevators will make the transit as lightning-like as possible. Dwellers on Long Island who now must wait for ferries, and fume in crawling surface cars, will be picked up as they reach the steam terminal, shot under the river, lifted up to the Subway level at Park Avenue and Thirty-third Street, and then bowled up or down town with touch-and-go rapidity. So much of the bewildering transportation problem has already been worked out.

But not content with this, the Pennsylvania Railroad, which owns the Long Island Road, has evolved plans that the near future will undoubtedly see carried out. At Greenville, New Jersey, almost opposite the end of Long Island, great docks and piers have already been provided for; roads or franchises through Brooklyn and beyond along the island have been secured and also permission to bridge across Ward's and Randall's Islands to the Bronx. What does it mean? That trains will be run from Washington, or Philadelphia, or even from the West, to the Greenville terminal, ferried to Brooklyn, sped around that Borough and over the new bridges to the mainland in the Bronx, and so away through Connecticut to Boston, a vast improvement on the present car ferry. A tunnel under the Narrows from Staten Island is also on foot.

The great project of binding New York to the country across the Hudson will crystallize into action when the railroads furthering it have decided on the means to be employed. Tunnel engineers aver that a tunnel should be used: a bridge, say they, will cost too much—not for the actual construction, though a bridge to carry the trains of a half dozen roads will be very costly, but on account of the land required by terminals and approaches. Bridge engineers, on the other hand, question the feasibility of a tunnel through the soft ground that must be bored. One bridge plan, however, has been vetoed by Governor Odell; it was said to be a land grab. Even the wonderful suspension bridge designed by Gustav Lindenthal, a colossal structure with towers twice as high as those on the other great bridges, and with accommodations for many trains, will cost tremendously for terminal acreage entirely apart from the reasonable expense of its four-mile expanse. But if economical considerations are thrown to the winds, if a tunnel for passengers merely, like the one across the city, will not content the energetic organizers now pondering on the matter, the stupendous Lindenthal bridge may yet dwarf the other bridges of the world. At any rate, before many years, Manhattan Island will be tied fast to the growing communities on both sides.

Here, then, is a vast, closely knit, wisely organized, and convenient system by which Manhattan Island will be linked with the mainland. From any point in the city proper, swift, sure transit facilities will extend in every direction. To the north and northeast the Subway will give speedy access to a thousand localities. From the west side a tunnel or bridge will lead to New Jersey; from the east side both tunnel and bridge will make short work of the water space. From the crowded business districts four thoroughfares will lead south and east across the river—almost as many as lead north upon the land. Engineering will have conquered nature. Manhattan will be part of the mainland.

The vast masses of people that will rush underground by the Subway, in surface cars and along elevated tracks, across bridges, through tunnels, across the many ferries, to the whirl of feverish activity at the lower end of the island, create daily a force that pulses to the very limits of the world. New York does not live and work for itself alone. It is the natural centre of American expansion. Hundreds upon hundreds of tons of the products of the soil and the factory are dumped every day upon the little island, and are sent across continents and over seas. A new Central Station is only lately completed in which is every known facility for the easy handling of traffic. The entire water front is being reconstructed. A long line of buildings on West Street has been torn down that there may be space for the drays and the trucks which draw great loads to the ocean liners. The floating fish markets have been crowded up the river. The old-time wooden docks are gone, and in their place are being built of solid stone and concrete ten new permanent piers 800 feet long and 125 feet wide and two stories high, costing upwards of $3,000,000. South Street, too, is being widened. Along the East River eight new piers are being constructed large enough to accommodate the largest coasting vessels. Over at Hoboken are the new North German Lloyd piers, the staunchest in the world. Up-town above 50th Street on the East River and above 128th Street on the West Side smaller piers are being built. A new main channel 40 feet deep, by which the largest vessels may sail at any tide, is being dredged in lower New York Bay by two mammoth steel ships that can scoop up 8,000 tons an hour. The new Ambrose Channel is being made to the Brooklyn docks, and the sand and mud taken out is carried to Greenville, where it is used as filling for the long line of docks which the Pennsylvania Railroad is building in the harbor. New York is rapidly preparing itself to handle deftly a world's trade.

For over sixty years the people of New York, surrounded on every side by ocean, sound and rivers, have anxiously planned against a possible water famine. A half century ago the Croton Reservoir was built and the water from it was brought to the Central Park reservoirs by what is now known as the old Aqueduct. Ten years ago the new Aqueduct with a capacity three and one-half times that of the old was added to the system. The reservoirs at the city end of the line hold less than enough for four days' consumption at the regular rate. Any stoppage of the flow would, therefore, put in jeopardy the comfort

and even the health of the people. To meet this danger the new Jerome Park Reservoir with twice the capacity of the Central Park Reservoirs is being built. The place of this storage basin seemed naturally made for it, for the long ridge from which valleys shelve down gradually on either side is considerably depressed at this point. For more than a mile this tract, half a mile wide and covering altogether some 230 acres, is being cut through rock and earth to a uniform depth of twenty-six and one-half feet. For half of its length an artificial embankment must be built and the entire inside slope will be covered with six inches of concrete and a paving of granite blocks. Within the embankment is a wall of solid masonry rising considerably above the water line. While there is at Jerome Park a fortunate depression of the long ridge, there are portions of the tract over which the reservoir extends which rise out of the depression, and the cutting necessary at the deepest indentation was sixteen feet. More than half of the excavation has been made through solid rock. Standing on a lift of ground where the old Aqueduct tunnels its way to the city one seems to be in the centre of a vast amphitheatre of energy, a Cyclopean circus in which the performers are monstrous machines, huge rocks the juggled balls, and blasts of dynamite the snap of the ringmaster's whip. Steam shovels scoop out a hole in the earth, each doing in a few minutes as much as a man could do in a day. A net-work of iron tracks has replaced the race course and more than twenty locomotives pull loads of earth or rock packed in cars that discharge their load automatically. The long iron hooks operated by a derrick prod the sides of a ridge that are aching from the blasts of a few hours before and loosen great pieces of rock. Over at the right is the humming and snorting of the stone crushers to which the displaced rock is conveyed, and beyond is the big bed of crushed rock which will help to pave the floor of the reservoir. On every side are the thudding of compressed-air drills, the guttural shouts of a thousand and more men, the manifold voices of grimly cheerful activity. Over at the northwesterly side of the reservoir the sub-soil was found to have a quicksand constituency and a strong wall has been built for some distance instead of an embankment with a core wall. It is estimated that, when all is done, about 7,000,000 cubic yards, approximately half earth and half rock, will have been excavated. Most of this which can not be used is taken east to Bronx Park and Pelham Park to fill in swampy land. Through the very heart of the reservoir, dividing it into two basins, is being built of solid masonry a triple aqueduct, containing the old aqueduct and a branch of the new, divided into two eleven-inch conduits which lead, one into the eastern and one into the western basin. Not only is the storage end of the water system being enlarged, but the base of supply as well and in even greater proportions. The old Croton Reservoir can hold about 1,000,000,000 gallons. A new dam is being built across Croton Valley below the old dam. Four years were spent in excavating for a sufficiently firm bottom. This done, the dam has been built partly of earth with a core wall, partly of masonry, and an investigation is being made to ascertain if it will not be safer to tear away the earth wall and to make the entire structure of solid masonry. The total capacity of New York's new water supply will be about 75,000,000,000 gallons.

Manhattan Island is a long and tapering rock upon which layer after layer of sand and gravel, trap rock and boulder have been deposited. At Jerome Park, on the mainland above the thin flash of water that cuts the old city from its rapidly spreading limits, something like ten billion pounds of rock are being loosened and torn away. Down on the course of the Subway at Union Square the solid foundation of the city reaches up so near to the surface that one marvels as to how the trees in the park bury their roots Even at the lower end of the island the engineers who are probing their way down to firm support for the tall office buildings have not failed to find rock bottom within suitable distance. The newer New York, therefore, is rising upon old and solid foundations. From the Battery to the Bronx the city of wood and stone is being rapidly torn down and the city of steel is being built in its place. Stone is no longer, in any large sense, builder's material. It has become rather a mere detail in the architecture of the building along with the interior woodwork, the burlap on the walls, the stained glass windows. After the steel is up, the building built, something must enclose it. The only questions are those of

beauty and serviceability. It is not uncommon to see the wall literally built from the top down, the sixth story and all those above it entirely completed before the stone for the lower stories is shipped from the quarry. If the builder desires to push the work along rapidly, or if he lacks the material for the lower stories, he can often save much valuable time in this way. Occasionally, it is true, in high and exposed structures the enclosing wall of stone adds sufficiently to their strength without the customary use of more steel for wind bracing. The ugly, awkward framework of girders and beams extends itself in many cases twenty and more stories into the air, and the way has been shown in one foundation construction for digging a building downward as well as pushing it upward, by which a hilltop 300 feet or more in the air and a cavern 100 feet below ground will be contained under one roof and will be connected with a single elevator service. But the actual excavating for the foundations, the laying of the concrete, the gradual lifting upward of the structure, the adding of the last beams, on a dangerous footing at a dizzy height while a chill wind benumbs: these do not make the rebuilding of the city. They are only incidents, just as the firing line in a battle is an incident. The battle is fought in the general's tent. New York is being rebuilt in small rooms at the top of some of the highest new buildings, where men draw and calculate and plan. By the new construction office buildings, apartment houses, blocks and hotels are made much as a bridge is made. They are really built before they are begun. A small number of engineers direct, therefore, the remaking of a great city. Each new building brings new problems and difficulties to be overcome. Each engineer has his own way of planning to meet the obstacles.

The engineer has, of course, his rules of conduct in the architect's drawings. He examines carefully the soil, that he may determine how much of the weight of the building he can trust to it. If the sand is of the shifting variety, of quicksand constituency, he must drive piles to the more solid foundation below the sand, or he must sink caissons, or, because shifting sand, if it can be held in place, is the best sort of foundation, he confines it with a wall of masonry. Whatever portion of the load the natural ground can not carry firmly is distributed over a bed of concrete with which he plans to line the bottom of the excavation. Sunk in the concrete will be, perhaps, a grillage of steel beams. If the load requires them granite blocks are made to stand out of the concrete and bear the cast-iron shoe from which the first beams lift themselves upward. Perhaps the wall of the adjacent building will be menaced by the digging of the new foundation. Perhaps he will be forced to brace the old wall at the very beginning. Perhaps he will move the base of the beams away from the wall and by additional bracing evenly distribute the load without endangering the other building. Every detail must be planned to the smallest fraction of an inch or an ounce. In each story that rises the measurements of the "tees" or "channels" must be accurate, for the framework of the entire building is made in the steel mills and, arrived here, has only to be fitted together. Every rivet must be precisely located and every hole exactly placed. Beams and cross-girders must intersect accurately in steel as on paper, windows must be arranged for—even to dormer windows in the roof, and the network of beams which holds the terra-cotta tiling of the roof must be perfect in plan. The engineer must brace the building against storm and wind. Bound then by the demands of the architect's drawings and the condition of the ground and the neighboring buildings of the locality, the engineer constructs on paper the sky-scraping office building or the massive apartment house; the material is ordered according to his plan and the men in the field arrange the material into the building he has constructed.

Reaching up hundreds of feet into the sunshine, these woven shafts of steel have many advantages over the older masonry construction. Mathematics plans them accurately, while in massive construction many details had to be arranged according to precedent and rule rather than by calculation. The weight of the building is much less, simplifying the foundation construction. The steel columns which carry the load are uniformly small and take comparatively little space. Windows can be made much larger, especially as the building grows in height, when, in massive construction, the supporting walls must grow thicker. There is, of course,

more floor space in the upper stories than in the older buildings. The division walls in massive construction are absolutely fixed. In the new buildings the thin partition walls in any story can be altered or taken out to suit the convenience of new tenants. It is true, of course, that the permanency of steel buildings has yet to be proved by long tests, but the good covering of Portland cement or concrete and careful painting should make the framework durable, and a casing of porous burned fire-clay terra-cotta should protect the steel from fire. The loads not only of the floors, but of all the weight which the floors may have to carry, are figured for in the framework construction, and the strain of a heavy wind beating upon the sides of the building is generally met by reinforcing with more steel or by direct bracing. In the case of the higher buildings certainly the new method of construction is more economical. The entire lower end of the city is rapidly being covered with these sky-reaching steel buildings, and the promise is of a time not far distant when the business section will be a vast mountain of steel through which will cut the intersecting thoroughfares like deep canyons, with streaks of shine and shadow. Some conception of the mere size of individual building achievements can be reached in a few figures of the Broad Exchange office building—the largest in the world—which contains a total floor area of eleven acres, accommodating between seven and eight hundred offices and eighteen elevators; in which the structural steel alone amounts to more than 10,000 tons, and the bricks used, laid end to end, would extend nearly 900 miles.

Not only are the buildings lifting themselves to heaven but they are, also, crowding their way down to the very ribs of the world. By a very retaining wall of pneumatic caissons, from which the workmen emerge half trembling from the added pressure within of twenty-five pounds to the square inch, the engineers of the addition to the Mutual Life Building, have pierced through forty feet of shifting surface sand, on through a deep section of trap rock and boulder, through another layer of sand to the bed rock 100 feet below the street level. The wall of an adjacent building was of doubtful strength near so deep an excavation. They rebuilt it, while the building daily continued to handle its traffic. The original intention was to obtain solid foundation for the building, for the smallest sinking of any portion would throw the entire structure out of gear. The actual result is indeed that the building is founded upon a rock, and it is more. Five stories of space below ground will be ready for use, and quantities of machinery will be located there, leaving room for offices and other rooms which can be rented. It is possible that, in the newer city, many men will rush by the Subway to and from underground offices.

Because the old lines of cars and ferries and the old bridge were inadequate for quick and easy transportation of all the people, there has been a rapid development in the last decade of a most interesting type of building, the uptown tenement or apartment house, in which are dozens upon dozens of city homes. These massive structures each covering often an entire city block, are a slightly depressed continuation of the down-town "sky-scrapers." Because of the many apartments the interior must be practically open to the sunshine, and even more than in the office buildings the newer steel construction simplifies the lighting problem. So detailed is the planning of some of these houses that sometimes the furnishing of each room is in a measure located tentatively so that every facility for comfort may be put into the original construction. Built around a large and airy court, or with wide clear air-shafts, with the best possible sanitation, with every convenience known, these apartment houses are expensive models of the simpler tenements which are eventually to bring the unknown necessities of fresh air and sunshine, cleanliness and moral and physical sanity to the lower East side. They are of themselves a distinctive feature of the new city. New York is too busy to be a city of homes. It is rather a city of abiding places for people who are economical of space and extravagant of diverse energies. Many new and luxurious hotels, in which people live in New York for a week or a winter at their will, are a part of this system of city existence.

The farther one goes north from the nervous activity of the lower districts the more is seen of the city's reaching after beauty and dignity. Central Park is being so rapidly surrounded by a wall of steel and stone, the city is so surely shutting it in on all sides, that it is gradually losing much of its old-time

natural beauty. But out in the Bronx district a new park with the simple beauty of rolling New England country is being laid out. Zoological Gardens are being rapidly completed. An immense wire structure for flying birds is now finished, many fenced-in fields for animals are already occupied and stone houses for others are being built. Farther north and west are the museum, the conservatories and the gardens. But much of the tract is still untouched by the landscape gardener and is unstraightened of its tangled natural beauty. Beyond are the seventen hundred and sixty-four acres of practically unmolested Pelham Park with one entire edge upon the bay. Standing on the platform of the elevated railroad at 116th Street at sunset time, the great arch of the Cathedral of St. John stands out like a great shadow from the red glow of the sky. Answering a question concerning the big domed building at the right, a bright-eyed urchin said confidently:

"Oh, dat's Harlem."

But it is, as a matter of fact, the new library of Columbia University standing up out of the quadrangle of recitation buildings. Farther still, at the end of Riverside Drive, is Grant's tomb, and still farther beyond stretches the new Riverside Viaduct. Down town in the crowded sections also, where existence is sordid to an unthinkable extreme, much is being done to add a glimpse of outdoor health and beauty. Half a dozen recreation piers have already been built, and a number of small parks are being planned.

While the growing population of Manhattan is becoming concentrated yearly, the greater city expands far down into New Jersey, up into New York and Connecticut and over into Long Island. Brooklyn, with its houses worn with traditions, its clubs, its parks, its churches, constantly extending farther out upon the island, is becoming more and more a city of homes. For dozens of miles north, south, east and west land is gradually increasing in value as the men who work in the rush of the city reach out for the homes and the quiet of the country. Eventually Manhattan Island will be a great rampart of steel and stone, which each morning from every side, across bridges, through tunnels, by train, by boat, on foot, hundreds of thousands of men and women will storm, and at night will drift back to rise next day to renew the fight. For New York must always be the amphitheatre of struggle. It is because the struggle has become more swift and strong that New York is being rebuilt.

MAKING LONG TROLLEY LINES

A SYSTEM OF 1,333 MILES—THE HOPE OF THROUGH CARS FROM NEW YORK TO ST. LOUIS—THE REVIVAL OF CANAL TRAFFIC

BY

W. FRANK McCLURE

THE consolidation of electric railways has been begun on a large scale and is going on with surprising rapidity. Already the roads controlled by a single syndicate, with headquarters in Cleveland, Ohio, and now to be operated as one system, are 1,333 miles long and have outstanding stock and bonds of more than $100,000,000. To travel by electric roads from New York to Chicago and St. Louis, in sleeping and dining cars, is a plan that is thought at some time to be possible.

In the accomplishing of this consolidation, the history of the consolidation of steam railroads is repeated in this respect—short lines of road which were built for only local uses are now welded together into one long chain. Many of the great trunk railroad systems are simply the consolidations of just such short lines of local roads. The consolidation of street railways seems likely to be made much more rapidly.

In September all the roads thus far consolidated began operations as a single sys-

tem. The accompanying map shows their location. The population served by them exceeds 2,000,000 and the annual earnings of the roads as separate lines have been $10,000,000.

These roads extend from Ashtabula, Ohio, to Cleveland, to Sandusky, to Toledo, and to Detroit, Mich. Thence they connect with Flint by one branch and with Port Huron by another. The route could not have been better planned if the system had been built as one line. Over it, it is now possible to travel nearly 350 miles in a straight line. Within two years, the lines will probably be extended to Buffalo and to Chicago. At an early date an entry may be made into Pittsburg and into Wheeling, W. Va., and also into Cincinnati. If the work of consolidation goes on as is expected, New York and St. Louis will be connected.

Three-fourths of the mileage now controlled by the company is over private rights of way. The management has decided to accept no franchises from towns for public highways. Thus restrictions as to speed are in a large measure avoided. The routes parallel lines of steam railroads or of principal highways.

Cars of the new consolidated railway will be capable, it is promised, of making forty-five miles an hour outside the cities. A mile-a-minute rate is now made daily over short distances. Mr. Robert Hammond, an English electrical engineer, a few weeks ago was taken on a sixty-five-miles-an-hour ride. He himself kept the time and the speed, and he expressed amazement at what impressed him as being the daring of the Americans. The restrictions within the city limits are the only impediment to the fast pace of through cars. Forty-five minutes are required to run over seven miles of track within the limits of Cleveland, while the regular running time from the limits to Lorain, a distance of twenty-four miles, is forty minutes.

Sleeping cars and buffet dining cars have already been ordered. It is expected that in a short time a passenger may go to bed in Buffalo and wake up in Detroit, having made the journey over a traction road. On the other hand, the accommodation cars will make more stops in five miles than the average accommodation train on the steam roads now makes in fifty miles.

The freight business of the consolidated street railways will be an important part of their work. Expensive depots for freight alone are now under construction in several cities. The one at Cleveland will cost $300,000. The fact that electric railways can haul small articles of freight for five and ten cents insures them a package-business which the steam roads do not get and do not want.

The proposed lighting of cities and towns along the routes of the consolidated roads is one of the economies of the plan. This light will be furnished by the power houses from which the cars are operated. In Sandusky, Akron, Fremont and Toledo the company is now furnishing light.

The towing of canal boats by traction cars is another plan. This will be done along the old Miami & Erie canal, the length of which is about 200 miles. The traction road along its banks has been constructed over sixty miles this year. Trolley cars will take the place of mules which were the power used in the days when Garfield trod the towpath. It is obvious that the speed of the boats will be enormously increased. The same cars which tow the boats will of course carry passengers.

An organization of the managers of the many lines in the new system was made in September, to exchange views about the conduct of the several railways and to keep in touch with the various properties of the syndicate. The association of managers will meet once each month. The attitude of the steam railroad companies toward the trolley lines is changing, especially within the territory of the consolidated company. When the first lines were constructed the railroads compelled the projectors to pay $1,000 for every crossing built at the intersection of the steam roads, in addition to the whole cost of the crossing. Today the railroads are allowing the electric lines to cross free of charge, and are paying half the expense of the work. A prominent railroad manager is quoted as having said that he had no objection to the spread of electric roads, that in fact he favored them because he expected that they would relieve the steam railways of much of the business now regarded by them as objectionable, but which they are obliged to handle.

THE GREATER AMERICA

COMMERCIAL EXPANSION OF THE COUNTRY AS A SOCIAL FORCE—DEMOCRACY FAVORABLE NOT ONLY TO INDUSTRIALISM BUT ALSO TO GENERAL CULTURE—THE BUILDING OF A NEW AMERICAN CIVILIZATION

BY

FREDERIC EMORY

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"I HAVE no doubt," said De Tocqueville more than sixty years ago, "that the democratic institutions of the United States, joined to the physical constitution of the country, are the cause (not the direct, as is so often asserted, but the indirect cause) of the prodigious commercial activity of the inhabitants." He adds, further on: "Democracy does not give the people the most skillful government, but it produces what the ablest governments are frequently unable to create: namely, a superabundant force, and an energy which is inseparable from it, and which may, however unfavorable circumstances may be, produce wonders."* The conclusions of the acute French observer of the earlier stages of our development as to the utility of democracy to industrialism have been abundantly borne out by subsequent experience, and if he were living today, he might revise some of his opinions as to the disadvantages of democracy as an ethical and governing force.

REFINING INFLUENCE OF MATERIAL GROWTH

It is too soon, as yet, to determine to what extent democracy may vindicate itself from the charge of being a foe to the highest forms of culture and the special friend of mediocrity in social or political development, but it undoubtedly favors superiority in industrial achievement. At all periods of the world's history, the nations having the greatest material prosperity have been the most advanced in the politer arts, and if we may judge from the rapid multiplication in recent years of institutions of higher learning, of art museums, of scientific collections, our growth in wealth is accompanied by a corresponding beneficence in its use which encourages the hope that democratic institutions will interpose no bar to supreme success in literature, in art, in any branch of intellectual development. Upon the contrary, it is reasonable to expect that the free play of expansive forces which democracy has been found to secure and foster, may operate as effectually in promoting national taste and refinement as in achieving material triumphs.

"In Chicago," says Frederic Harrison, which, he explains, seemed to him somewhat unfairly condemned as devoted to nothing but Mammon and pork, "I heard of nothing but the progress of education, university endowments, people's institutes, libraries, museums, art schools, workmen's model dwellings and farms, literary culture, and scientific foundations. I saw there one of the best equipped and most vigorous art schools in America, one of the best Toynbee Hall settlements in the world, and perhaps the most rapidly developed university in existence. . . . The impression left on my mind was that the citizens of Chicago were bringing their extraordinary enterprise to bear quite as much on social, intellectual and artistic interests as they confessedly do on grain, ham, steel and lumber."† Mr. Harrison finds these things to be true generally of the whole country, and while he holds, very justly, that the fact that we are so bountifully providing ourselves with the instruments of education does not necessarily imply that we have already reached the educational standards at which we aim, he fully recognizes the potentiality of such a movement and sees in it ground for hope that America will "produce a national literature of its own, when it has had time to create a

* "Democracy in America." Revised translation by Prof. Francis Bowen, 1862. Vol. I, pp. 320-321.

† *The Nineteenth Century*, June, 1901.

typical society of its own, and intellectual traditions of its own."

OUR CAPACITY FOR CULTURE ALREADY DEMONSTRATED

We have, moreover, good reason for being sanguine when we review certain phases of our social development in the past which undoubtedly prove that the crudities with which we are charged are not indigenous to us as a people nor fairly attributable to the workings of democracy. The fact is too often lost sight of that, under precisely the same laws, the same institutions, culture and refinement have actually flourished in the United States wherever the conditions were favorable, and that the retrograde movement to materialism proceeded only where the struggle for existence was so engrossing as to leave no room for the superfluities of elegance and ease.

If we go back to the birth of our nation, we discover abundant evidence of social and intellectual progress which, in many instances, was not so far behind that of the mother country. Our representative men were often courtly, polished, with not infrequently a rich store of classical learning. The general tone of society was refined. In colonial times, men of means sent their sons to the English universities to be educated, or to London to study medicine or the law. Communication with England, if not rapid, was constant, and the culture, art, letters of the Old World exerted a direct and powerful influence upon colonial taste and manners. The impulse thus given did not wane after the separation from Great Britain in any part of the Atlantic seaboard. In the North, it continued to exert itself among the professional and mercantile classes. No more fastidious forms of gentility could be found anywhere than in the quiet homes of the old families of Philadelphia, New York and Boston, and among their occupants were many whom wealth enabled to become dilettanti, litterateurs, connoisseurs of art. They were seldom ostentatious, and they often took an active part in public affairs. In the South, a much more obvious form of aristocracy was established and maintained by the operation of slavery and the plantation system, and it continued to flourish down to the War of Secession. In neither case did Democracy exert an appreciable effect in retarding the growth of a cultured class. Men who in their social relations were most exclusive, or who set for themselves the highest standards of conduct and of taste, were often the most extreme in advocacy of Democratic principles.

HOW THE TYPICAL AMERICAN WAS EVOLVED

It is in the physical effort involved in subduing a mighty continent that we find the real cause of the absorption of the American people, for so many years, in industrialism, to the exclusion of the æsthetic side of their natures. At first, the migration westward was not from Europe, but from the Atlantic seaboard. Some of the inhabitants of the former colonies carried with them the refining influences of their old environment, but those were gradually lost in the rough, hard life of the plains. By far the greater number, probably, were people of the poorer sort, and these, of course, had but little refinement and less learning. After a while, the colonial pioneers and their descendants, who were inevitably more roughened than themselves, began to be reinforced by a constantly swelling stream of immigration from Europe. The new settlers added immensely to the industrial forces of the country, but they seldom brought with them any influences of a refining character. Thus, there was gradually built up everywhere, except within the narrow limits of the seaboard states, a sturdy, virile population—intent upon developing a virgin soil—which, at length, grew so strong, so self-confident, so prosperous, that it inevitably took the lead in public affairs and gave its intensely practical cast to the national character. The country owes a great debt to this, the dominating element of its population. From it have come the energy, the adaptability, the inventiveness which have won us our unexampled prosperity. It has supplied us with men of talent and of force in every walk of life, not excepting the learned professions and the highest offices of the Government. Their public spirit, their patriotism, their hard common sense, have often more than atoned for their lack of personal graces, their disregard of the finer amenities of life, their impatience of ideas outside the range of their almost primitive sympathies. Among them, the domestic virtues flourished side by side with a marked unresponsiveness to other forms of

sentiment and delicacy of feeling. Above all, it was they who, toiling unremittingly to improve their condition and that of their families, reared, course by course, the mighty fabric of our industrial power.

WHY WE ARE NECESSARILY A BUSY PEOPLE

Democracy naturally tended to aid the growth of such a class. Perhaps its most strongly contributing factor was the denial of the right of primogeniture. Where it is impossible to conserve a fortune in the hands of a single family, every individual, in one generation or another, finds himself confronted with the necessity of working. Industry thus became the habit of our people. Even a well-to-do man deemed it wise to train his children to some form of employment. We soon grew to be a passionately busy nation, in which the drones were few, and by no means estimable in public opinion. A man without some occupation came to be regarded, more or less, as a kind of social incubus. The result was an intense though unconscious concentration of national purpose. Never before in the history of the world was there so nearly unanimous a deification of physical industry. This unanimity was greatly facilitated by the freedom of communication and of trade among the States. All the elements of our population commingled without let or hindrance, except for the accidental barriers raised between the North and the South when the controversy over slavery became acute. As soon as the South's resistance had been broken down, industrialism swept like a deluge over the land, and the Old Order in the South itself has almost wholly disappeared under its submerging waves. Today, to quote a writer in the London *Times*, the people of the United States are "so versatile, so far-seeing, and so enduring in effort that the very forces of nature seem to take more plastic shape in their nervous hands.*"

A NATION OF INVENTORS

The fecundity of our people in invention, so greatly stimulated by our patent system, was but the natural outcome of our industrial absorption and eager activity in all forms of mechanical employment. Undoubtedly, the individual wit was sharpened, the individual ambition stirred by the consequence we learned so soon to attach to material success. In his very valuable review of invention during the past century,† Mr. Edward W. Byrn presents a most interesting picture of "the gigantic tidal wave of human ingenuity and resource" which has fructified human effort more widely and with more beneficent results in the United States than anywhere else in the world. At the beginning of the century, he says, James Watt had invented the steam engine, Eli Whitney had given us the cotton gin, John Gutenberg had made his printing type, Franklin had set up his press. We had the telescope, the mariner's compass and gunpowder, but "inventive genius was still groping by the light of a tallow candle." There was still a lingering prejudice against invention, and "a labor-saving machine was looked upon askance as the enemy of the laboring man." Since then, the benefits of invention have so amply proved themselves that today, "the inventor is a benefactor whom the world delights to honor." There is hardly an occupation, a phase of life, in which labor has not been made easier and more productive and individual comfort immensely promoted.

In the long roll of the nineteenth century's achievements, we find the steamboat, the railroad, and a vast number of machines propelled by steam; the air brake, the sleeping car, the telegraph, the ocean cable, the telephone, the phonograph, the graphophone, the kinetoscope; the fire and burglar alarm and messenger boy service; the application of electricity in the production of light and power; the cook stove, the coal oil lamp, the churn; photography in its many forms; the reaper, the mower, the thresher, the corn planter and a host of labor-saving implements for the farmer; the sewing machine, the typewriter, the web-perfecting press, the linotype machine; the gas engine, the elevator, the steam fire engine; the great variety of useful articles made from india-rubber and celluloid; the fire-proof safe, the ice machine and cold storage system; the canning of vegetables, fruits, meats and oysters; the stem-winding watch; the use of iron and steel for house and ship building and for roofing; the suspension bridge and tunnel; the revolver, the repeating rifle, the quick-firing gun; the ironclad war vessel; the

* American Engineering Competition; reprinted from the London *Times*, 1901.

† "Progress of Invention in the Nineteenth Century."

roller mill, the shoe machine, the hydraulic dredge; the Jacquard loom; the artesian well, the friction match; the use of anæsthetics and of antiseptics in surgery; the making of false teeth and other achievements of dentistry; the manufacture of artificial limbs and eyes; the spectroscope, the X-ray apparatus; and finally, the automobile with its promise of revolutionizing local transportation, and, perhaps, of furnishing the farmer with a convenient substitute for horse-power, or even steam, in ploughing and otherwise cultivating his land and hauling its products to the market or the barn.

AN ARISTOCRACY OF LABOR

Whether this or that one of these many exploits of inventive genius originated in this country or not, it may be safely asserted that all of them have received the widest and most fruitful application here, and the result has been to place us far in advance of any other nation, not only in industrial production, but in the average of ease and comfort for the individual in his daily life. The laboring man has benefited enormously. It is in large part because he has made the fullest and most intelligent use of labor-saving appliances that the American workingman is the most prosperous, the best fed and best clothed, the most independent, the most moral and law abiding of all in the world. And thus at the very basis of society we have industrialism exerting a powerful influence of a refining and elevating kind, for it is not to be doubted that where the bone and sinew of the land is freed to the largest extent from the grinding necessities of toil, it will avail itself more largely of those facilities of education and of self improvement which are provided in this country with such a liberal hand.

INDUSTRIAL EFFICIENCY A SOCIAL FORCE

To machinery, as much perhaps as to our democratic institutions, we owe it that we have no peasantry, no definite lines of social demarcation, no privileged class. The moment a boy enters a factory he is on the road of progress which may lead to any height, and at any rate is sure, if he be sober and industrious, to bring him to the goal of good citizenship and an intelligent participation in affairs. In any assemblage of operatives and mechanics who have received the benefit of a common school education and are imbued with the American spirit, one usually finds a surprisingly high average of general information and breadth of view. While some of our labor organizations have not yet emancipated themselves, any more than have many of our employers, from the mischievous idea that there is an irreconcilable conflict between capital and labor, and are still too often the credulous dupes of professional agitators, it is a significant fact that trade-unions in the United States exhibit an increasing spirit of accommodation and are much more open to conviction than are similar organizations in Great Britain. Every American workingman is a reader of the newspapers, and it may be assumed that he is not ignorant of the fact that the obstinacy shown by the British trade unions in seeking to limit production on the part of the individual or to impose other unreasonable conditions has, on several occasions, given us a golden opportunity to enter their markets and secure new outlets for our goods. Notable instances of this are seen in the great boot and shoe and engineering strikes which, by cutting off the home supply, enabled us to flood the British market with our commodities, to the great injury of the British operative. It is but natural to suppose that our labor organizations have taken the lesson to heart, and perceive that there is a closer community of interest between employer and employed than might have been admitted a few years ago.

BEGINNING AT THE BOTTOM

We find another and even more striking example of the social improvement wrought by modern industrialism in the recent experience of the Southern States in cotton manufacturing. Nowhere among the white population of the Union, probably, was there so much illiteracy and poverty as notoriously existed among the "cracker" and mountaineer element of the Carolinas and Georgia. These people are being employed in increasing numbers in the cotton mills, and a general and very marked improvement is noted among them. It is a highly significant fact that they take a more intelligent part in politics and are no longer so easily led by the nose by leaders appealing to their prejudices or their cupidity. Like the "poor white" everywhere, they will speedily emerge from a state of more or less

apathetic dependence into one of active self-assertion and social progression. As democracy secures to each individual, broadly speaking, equality of opportunity for such advancement, and in fact, under its practical working in this country, not only smooths the path of the humble to a higher level, but accords them special privileges and advantages at the expense of the community as a whole, it follows that, working hand in hand with industrialism, it is slowly but surely leavening the mass of society from the bottom.

PLUTOCRACY ONLY A TRANSIENT POWER

Objection may be made, and in fact is often made by foreign critics generally and by a limited class of social epicureans here at home, that the upper strata of society suffer from this process involving the subordination of their interests to those of the many; that, in order to obtain the highest forms of culture, we must establish definite standards of taste and conduct, and that these are possible only with a segregation of the wealthier individuals from the general mass upon whom the caste thus created would exert an uplifting influence. Merely to state this proposition to the average American is to refute it; for, as has been shown, there is no truth so widely recognized in this country as the fact that our freedom from class distinctions is precisely that which has contributed most to our general advancement. Moreover, all history proves that an aristocracy, so far from uplifting the masses, inevitably weighs them down. From this point of view, it is most fortunate for the country that individual fortunes, however great, must, under our laws of inheritance and testamentary disposition, be sooner or later divided and broken up, so that the seemingly all powerful plutocracy which our rapid industrial development has created during the past generation can exert but a temporary influence in imposing its will upon the great body of the people.

When our natural resources shall have been fully developed and the opportunities for acquiring vast wealth diminish, it is more than probable that the class of great millionaires will disappear. That they themselves fully recognize the instability of their tenure as a social force is proved by the immense sums bestowed by them upon public institutions, such as colleges, libraries, art museums, hospitals, etc., and the comparatively few instances in which the attempt is made to conserve the bulk of a great fortune in the hands of a single family. Nor is it at all clear that our attainment to the highest degree of culture and polish is in the least dependent upon the example or the patronage of an exalted caste. As a people, we are exceptional in this, also, that we have the most abundant opportunities for informing ourselves in matters of taste, of literature, of art; that we are free to choose from the intellectual and æsthetic storehouses of the whole world, and that there is abroad among us a spirit that will be satisfied with none but the best.

STILL NECESSARY TO BORROW FROM THE OLD WORLD

Undoubtedly, we have a Greater America—immensely greater than we dreamed of a generation ago—in our changed position before the world in industry, in trade, in finance, in political influence with other nations. Is it too much to claim, from what has been set forth, that we have also a Greater America in another sense—that is to say, in the demonstration which our social and intellectual development seems to be working out of the practicability of raising a whole people—not a favored fragment of them—to a relatively high level of culture and intelligence by the union of democracy and industrialism? The number of foreign professors in our colleges and universities, the enormous and constantly swelling volume of foreign literature we consume, the great array of foreign paintings, statuary, bronzes in our art collections—these would seem to indicate that we have no false pride in the matter, and that we fully recognize the fact that our intellectual activity, our literature, our art, while no longer imitative, are still more or less in the formative stage and must continue to seek refreshment from abroad. The Greater America has no need to be timorous of availing itself of such advantages. Its own achievements are so much the envy of the world, that it need not hesitate to take what the latter still has to give it, and the more intimate contact into which it has recently been brought with other nations may be found greatly to facilitate the task of intellectual and social advancement to which it has already so earnestly addressed itself.

A DAY'S WORK OF A LOCOMOTIVE ENGINEER

BY

HENRY HARRISON LEWIS

THE little box-like compartment in which I stood was not much larger than a medium-sized packing case, and, moreover, it was perched high up on the side of a boiler which fairly sizzled with the heat. In front of the box was a stubby funnel which poured forth smoke and cinders in a never-ending volume, and behind, hardly eight feet distant, were two furnace openings that seemed to belch fiery blasts with every movement of the engine. In addition, it was a warm day.

I had one consolation, a very human one. On the other side of the boiler, in a compartment equally small and equally uncomfortable, was the engineer. His sole advantage over me was that he had long grown accustomed to his surroundings. His day's work caused him to spend from eight to ten hours of each twenty-four in this cab, which modern engine-builders had seen fit to attach to the hottest part of the boiler.

It was about three o'clock in the afternoon when the big Atlantic-type locomotive backed down to the train of luxurious parlor coaches. The engineer had brought her in from the yard, and when I joined him he was giving the oil-cups his final attention. He was a grizzled veteran of the throttle, with an unsullied record of forty-one years in one service behind him. In appearance he resembled a New Jersey farmer with a predilection for the gold-bricks of the metropolis, but there was something in the intelligent gleam of his eyes and in the use of his words that stamped him as a man well read for his station, and one worthy of respect.

He knew his work, and he acted as if he loved it. He went over the many parts of the big steel monster with a skill born of long practice, poking the oil-can into little nooks and crannies, and touching rod and bearings with deft fingers. He noted, with a critical eye, a simmering of steam from the right cylinder and, plying a handy wrench, he cut off the leakage. He tapped at a spot on one of the big drivers, rubbed a bit of sand from a piston, filled oil-cups here and oil-cups there, and meanwhile talked to me.

"Been an engineer since 1860," he said. "I began when there was nothing but wood-burners, big flaming smokestacks, and all that, you know. On this same road, too. It didn't run to Chicago and goodness-knows-where in those days. Just straight through to Buffalo by way of Middletown and Goshen. Railroading was different then. Every engineer had to know how to take his engine apart between stations, if it was necessary, and how to patch anything from a boiler to a headlight. We used to attend to our own cleaning, and, in most cases, to our own repairing. And when we went out on the road"—here he chuckled reminiscently—"only the good Lord knew when we'd get back or where we would bring up. But here's the conductor coming to swap time. We'll leave in a minute or two."

The conductor, in his neat-fitting, brass-bound uniform, and the overall-clad engineer ceremoniously compared watches; there was a sharp, peremptory cry of "All aboard!" then, as I climbed to my half of the hot box, resting like a pair of saddle-bags across the boiler, I heard the shrill call of the cab signal whistle. It was the command to depart.

Kent ("Eddie" he was familiarly called, despite his seventy-four years of life and his white hair) put the long steel lever far forward, to give the cylinders ample steam to start the heavy train. Then he pulled gently on the throttle. The rails were wet and slippery from the drippings of many boilers, and it required several efforts to make a successful start. As we rolled out from the shed Kent glanced ahead to where a great, gallows-like framework stretched across the tracks. On this framework were many upright posts, one for each pair of rails, and from each post extended a

long wooden arm. That over the track along which we were slowly steaming presently dropped, and Kent gave the throttle another pull.

"That's one of our lighthouses," he shouted across the boiler. "And it's our compass, too. There'd be many a wreck if it wasn't for those semaphores and the clear heads controlling them."

Out of the yard with its intricate maze of rails, out past interminable strings of cars, on, on, rolling ponderously over grade crossings, we went with increasing speed until at last the dark, yawning mouth of a tunnel suddenly confronted us. Kent sent an ear-piercing shriek of the whistle echoing along the rocky face of the bluff; then we plunged into darkness.

The sudden change from bright sunlight and the rumbling, creaking voices of the train in the narrow tunnel were startling to me, but it was evident that my comrade in the other half of the cab still coolly held to his work. I could hear the hiss of the air-valve as he released the brakes and feel the stronger impetus of the mighty machine as he gave more power to the cylinders.

Presently there appeared ahead of us a dull, yellow ball of fire, glimmering in the darkness like a Cyclopean eye. It grew larger and brighter with great rapidity. Then with a roar it flashed past, dragging in its wake a score of little twinkling lights. A moment later we were out of the tunnel and were speeding across the Jersey meadows.

As she shook off the darkness of the tunnel our engine, number 509 on the official list, bent to her task with renewed energy. Under the careful handling of "Eddie" Kent she gradually increased her pace until at last we were making a full fifty miles an hour. After a dash along a straight stretch of track, there came a temporary slackening of speed at a bridge; then an open throttle once more.

It requires only one ride with the engineer of a passenger "flyer" to realize that eternal vigilance must be his watchword. Keen eyesight, a clear head, and iron nerves are absolutely essential. For a certain number of hours each day his life is not only in his hands, but at the very end of his finger-tips. Danger lurks in every rail and in every switch-point. There is peril in the curves and in the cuts and even in the straight stretches of track. There is a real and separate possibility of disaster in every joint and tie, and a man to be a responsible engineer must have that fact in his mind from the minute he enters the cab to the end of his trip.

"You can't run an engine and saw wood at the same time," said "Eddie" Kent in reply to a question. "You can't keep your head out the window and admire the scenery while your hand is on the throttle. And you can't dream or wink an eye, no indeed. In my run from Jersey City to Port Jervis there are more signals than you think, and I've got to see each of them in turn. And I've got to know where there's a grade or a curve or a bridge. And I've got to know, all the time, that my train is under control.

"Yes, it's true that engineers sometimes go all to pieces. They break down from sheer strain. It's the curves mostly. A straight track is easy sailing, but when you reach the end of that straight track and the rails vanish beyond a bluff or a bit of a hill, and you are going a mile or so a minute, you don't know whether you'll be able to keep on or pile up against something. It's certainly wearing on some men. I've seen fellows, big hearty men who didn't know what a nerve meant, finally come back from a run shivering like a cat in cold water. Probably they had been pulling a throttle for years and had accidents, too. I've read that it was because they had run over persons and were haunted by their dead faces, but it isn't so. It's the dread of what might be there in the darkness beyond the rays of the headlight.

"No, I can't say I've had that experience, at least not yet. Don't know why. I've been running more than forty years, you know."

Kent's superiors say that the hale old man fears only his Creator, and that in his whole long term of service he has never received a scratch.

Engine 509 was comparatively new, and the track upon which she was running had been stone ballasted and coddled to a condition approaching perfection; but still the ponderous machine swayed and pounded like a tug in a seaway. There were few stretches of straight track after the larger towns had been passed, and on approaching the vicinity of Tuxedo the curves became even more frequent.

Engineers of Kent's long experience are almost invariably given a fast express; and local runs, with many stops and consequent greater work, are left to the newer men. On the time-table these fast expresses cover from fifty to eighty miles without a stop, except on signal at a few of the most important stations. The time allowance is cut to the lowest point compatible with safety, and the engineer is often compelled to run at breakneck speed when unavoidable delays have caused a loss of time.

We were eight minutes late passing Middletown, and as our train was an express with a record, the engineer of 509 felt called upon to recover as much as possible before turning the train over to his successor of the next division. As the last fringe of houses dropped behind and a stretch of country with few grade crossings opened out before him, Kent began to coax his engine. He brought the reversing lever into a more nearly upright position, so that all the expansive force of the steam would be used, and he opened the throttle notch by notch.

The effect was almost immediate. The puffs from the smoke-stack were no longer apparent: they had resolved themselves into one continuous rumble. The rattle of the speeding train was pitched to a higher key. Everything quivered and trembled as if the very heart of the metal was being taxed to the utmost. The fingers on the different guages danced nervously. Through the partly open front door of the cab a gale of wind swept, carrying minute cinders which stung the face and hands like needles.

Still No. 509 was not going fast enough. Kent presently dropped the lever forward two notches. The massive engine responded instantly, leaping forward like a greyhound released from the rope. The terrible pace created a suction that caught up the dust and gravel of the road-bed and sent it swirling back in great clouds. The trucks and the drivers pounded the joints of the rails and the occasional switches like mighty hammers. The bell clanged in its frame.

Kent drew in from where he had been leaning far out of the window, and snatched a hasty glance at his watch. He smiled with evident satisfaction, and, closing the throttle a couple of notches, shouted across the boiler:

"Made up six minutes, and with bad coal, too. I guess it's the best we can do as we strike a heavy grade here."

The grade with its consequent stiff pull was followed by a long, winding descent. Steam was shut off, the labored breathing of the heavily taxed engine ceased, and, with one hand constantly on the air brake, Kent brought the train of parlor and buffet cars rolling gracefully into the station which formed the end of his westward run. No. 509, puffing and blowing, was turned over to the hostler, whose duty it is to take engines to the division yard for cleaning and inspection.

Several hours later No. 509, with Kent in charge, left for the homeward trip. It was now dark, and a raw, drizzling rain had set in. As the engine carefully picked its way through the labyrinth of tracks in the yard, it soon became evident that much which had made engine-running in the daytime an easy and generally pleasant task had vanished.

From the cab windows the fitful rays of the oil-burning headlight seemed to make the blackness even more intense. The rails, except for a short distance in front of the pilot, were invisible, but here and there little green or white signal lamps, indicating the location of switches or semaphores, served to guide us on our way.

The cab was in darkness, except for a partly shaded lamp burning in front of the gauges. Darkness was necessary. The man at the throttle required no assistance in finding air brake or lever, but the absence of light in the interior materially extended the horizon of his vision outside.

Kent never took his eyes from the track, except to snatch an occasional glance at the steam gauge. Leaning far out at the side window, despite the rain-shot gale which beat fiercely upon his rugged face, he kept vigilant watch for signal or sign of warning. The headlight, playing fitfully upon hillside or stony cut, upon bridge and track and level plain, gave him little aid. He felt that safety lay in the quick grasp of his hand upon the air brake and in the constant guarding by track-walker and watchmen of every inch of the road.

At stations, where the stop was of any duration, he went over his engine with oil can and wrench, and was not content to leave until he was certain that all was well. Thus

FORTY YEARS OF SERVICE

MEETING A "PASSENGER"
Photograph taken from the cab

carefully he brought the train under his charge over the road until at last a dull glow in the eastern sky, the reflection of the lights of a great city, proclaimed the nearing of the destination.

The last fringe of hills was crossed; then the wide stretch of salt meadows bordering the Hackensack gave level running. By now the several tracks of the road had broadened out into a score. Other railway lines were encountered and still others lay before us, some crossing diagonally and some at right angles. It was a perfect maze of tracks, and No. 509 proceeded cautiously. The entrance to the tunnel through which we had passed that afternoon was a short distance ahead when suddenly Kent shut off steam and plied the brakes. A little twinkling red light surmounting a semaphore was visible just in front. Kent whistled vigorously and presently the red spot became white.

There was a hissing of air brakes as they were released throughout the train and we rolled onward with increasing speed. A minute later, or maybe two, I heard a sharp

THE FIREMAN
Photograph taken from the top of the tender

THE "LIGHTHOUSE" OF THE RAIL

THE WIPER AT WORK
Who cleans engines twelve hours a day at twelve cents an hour

ENGINEER KENT
In his cab on Engine "509"

ENGINEER KENT AT HIS POST

exclamation from the other side of the cab, then came a grinding, jolting sensation as the metal shoes of the brakes clutched the wheels with all the power of the air, and then with a crash of splintering wood and rending metal No. 509's boiler head and pilot disappeared in the side of a box car, part of a freight train, which unseen by us had just started to cross our track.

The speed of the passenger train was sufficient to carry the engine half way through the car, and there it stopped, with a tangled mass of debris hanging on both sides of the partially wrecked cab. The confusion following the wreck quickly subsided when it was ascertained that no lives were lost. The track was speedily cleared, and No. 509, assisted by another engine, limped into Jersey City with her train.

"I guess it's all in a day's work," said Kent as we shook hands on the platform, "even to my coming interview with the superintendent. I am not to blame. That light was white, and it will all come out in the wash tomorrow."

It did. The resulting investigation developed a most peculiar incident. The fault rested with the semaphore signal, which, despite its reputation for accuracy and responsibility, had displayed a white light where a red one had been intended. It seemed that a small bit of solder in a part of the mechanism had melted under the heat of the lamp, thus allowing the arm to drop and expose the white light.

ORDERS FROM THE CONDUCTOR

The occurrence was beyond the anticipation of human thought, and it was philosophically accepted by the men of the throttle as one of the many picturesque incidents making up the day's work.

THE HEADLIGHT SHINING DOWN THE LINE

INDIANS COMING INTO A TRADING POINT

Bearing furs for barter

THE ROMANCE OF THE FUR TRADE

HOW IT HAS GROWN IN VOLUME BUT NOT LESSENED IN ADVENTURE—TRADERS' STORIES—THE WORLD-WIDE HUNT FOR PELTS

BY

W. S. HARWOOD AND FORREST CRISSEY

Illustrated from photographs by Mr. Harwood, Mr. Mather and others

AT the mention of furs the days of the Hudson Bay Company are recalled, when it ruled the great North, when its factors exercised the powers of feudal barons and made war and declared peace; when one after another of the companies organized in the United States contended with their powerful rival of the Dominion for a share of the traffic, and when the fur trader was the central figure of the Western plains and mountains. Few realize that the fur trade is today one of the foremost industries in the Northwest, that it amounts to millions of dollars a year and that its operations, although modernized in many features, still retain all the perils and picturesqueness which cast a glamour over adventures of the hardy plainsmen who trafficked in the precious peltries of the beaver, the otter and the sable, in the wild days of Astor, the Clarks and the McKenzies. In the remote regions of the North there are today posts where the same scale of prices which obtained a hundred years ago are in force, where a marten skin brings no more than a beaver pelt, and where the same primitive goods—including gun flints—are handled in barter that were passed over the counters of the traders when the last century was in its teens.

There is no need, however, to penetrate to these outposts of the snowbound wilderness to realize that the fur trade is a potent and interesting factor in the commerce of the present hour. A glimpse into any of the great fur houses of St. Paul, the centre of the trade in America, gives impressive evidence of the vast dimensions of the traffic. Here millions of costly skins are brought down from the trading rendezvous of the North, graded, "treated" and converted into garments of astonishing variety for the woman of fashion, the farmer, the hunter, the cattleman and the street-car driver.

Never has Fashion smiled with greater partiality on the men who traffic in furs than at present. She even defies the heat of tropic suns and the laws of utility in the distribution of her favors, and her decrees have established the use of this decorative material in almost every form that the imagination

A HUSKEY DOG TRAIN

Dog train of Huskies used in carrying furs from distant island points. These dogs are half wolf and are remarkably powerful. They can endure the severest cold, and wilt quickly in an average summer day of a temperate climate

THE HEAD OF A MUSK OX

could suggest, and with small regard for climate or seasons. This new movement had its beginning in the interest awakened by the fur displays at the World's Fair at Chicago, it was greatly quickened by the Paris Exposition, and will probably reach its culmination in the coronation of England's new monarch—for rich furs have ever constituted the most splendid trappings of royalty on State occasions.

Aside from the pageantry attending the changes in the royalty of Europe, the two things which did most to turn the tide of fashion in favor of fur were the wearing of puff sleeves, and the sensational price paid for rare specimens of skins to be exhibited at the Paris Fair. The former forced the wearing of collars and small furs as a matter of convenience and comfort, and ultimately familiarized the American public with the beauty and decorative possibilities of this material. Smaller and better furs were the order of the day. Stimulated by the results of the showing made at the World's Columbian Exposition, the fur dealers determined to make a brilliant display at the Paris Fair. Competition for the finest skins became extreme, and one dealer paid $2,700 for a black-fox pelt. This fact was chronicled in the newspapers of Christendom and made a strong impression on the fashionable world.

Persons of wealth have come to bestow as much care on their wardrobes of fine furs as on their displays of jewels. Mr. James J.

TRADERS GOING OUT TO BUY FURS

Striking a bad place in the road. Though it is April, much snow is still on the ground

TRADERS PULLING OUT FOR NORTHERN POSTS

Hill is the most expert and lavish collector of fine furs in the country and has the best and most extensive collection on the American continent. It is doubtful whether he finds as much pleasure in the acquisition of a new railroad as he does in securing a sea otter, a sable or a black-fox skin of remarkable beauty and perfection. His pleasantest moments of relaxation are spent in searching through freshly opened bales of pelts from the North, looking for the gems of the season's yield. He is an expert judge of their quality and does not need to rely upon the counsel of any man in order to select the rarest examples which find their way to the St. Paul market. Mr. Hill's fondness for a superb pelt is known throughout the fur trade and he has the pick of the whole field. Men of modest means are sometimes drawn into this passion for securing furs of peculiar excellence. A storekeeper living in the great "coon district" of Minnesota chanced to secure, in the course of barter, a skin remarkable for the beauty of its color and markings. At once he determined to have a coat of pelts similar to that which he had found. He sent it to St. Paul with instructions to scour the market for skins to match his rare find. At the close of each yearly harvest he visited the fur-house. His calls were repeated for ten years before the required thirty pelts were collected. This made his coat one of the most costly in the State, but his pride in it apparently compensates him well for his patience and

FASHIONABLE FOX SKINS

Red and yellow

SELECTING

These men are experts in sorting and selecting skins to be cut up

PLUCKING

This operator is cutting the long hairs from an otter

his expenditure. Probably the most celebrated skin that ever found its way into the fur market is known as the "silk robe." It was a buffalo skin having a dark brown coat as long, soft and silken as that of the daintiest Yorkshire terrier. This was made into a coat and sold for $200 and it is said to be the last buffalo coat made in St. Paul. The house which sold this remarkable skin would now willingly give $500 for it, but all trace of the treasure has been lost. Its history has been traced through

COMBING

This workman is combing out a raccoon skin to remove all snarls in the hair and any particles of dirt

SHAVING SKINS

By means of a series of small knives on the cylinder, the workman thins the skin

CAMP TRADING IN THE "UP COUNTRY"

FLESHING

The skins are drawn against the perpendicular knife in front of the workman to remove any particles of flesh which the trappers may have left on the pelt

SHAVING BY HAND

Some of the heavier pelts are worked down by a knife in the hand rather than by a machine

many tragic events. It was long owned by Stinkwater, a Sioux brave, who carefully avoided bringing the "King robe" with him when he came to trade at Miles City. For years its possession made him envied and sought after by the traders of that region. His invented account of the robe has been carefully preserved by an old trader and is here given in the Indian's own words:

"Robe, Stinkwater's great medicine. Him come from back of live buffalo. Stinkwater skin him alive. One night brave heap drunk. Ride pony—sleep all time. Pretty soon wake up. Pony scared; Indian scared too. See much buffalo. Stinkwater get sober. Pretty

CUTTING

An important part of the work where large sums of money may be lost by incompetence or carelessness

soon pony stumble. Indian jump on back of bull when pony goes down. Buffalo mad—leave herd and run like steamboat. Make for big bunch trees to rub Indian off. Indian slide down; buffalo get caught hard between two trees. Stinkwater mad—skin buffalo alive. Make big medicine for Sioux man."

One day the Indian, excited by whiskey, wore his treasure into Miles City and indulged in a carouse, in which he shot a friend. He was convicted of murder, but he cheated the gallows by taking his own life. The robe passed into the hands of the foreman of the jury that convicted him. It was soon stolen

from him and was next reported to have been seen in the hands of a cowboy near Livingston. In the course of time it appeared in a poker game in Helena, being accepted as collateral for a $300 bet. The holder of the treasure won heavily, but he was subsequently murdered on a trip to Fort Benton. Again the robe disappeared for a long time, but eventually reappeared in Miles City in the hands of an Indian who declared that he had killed the buffalo and tanned the skin ten years before. There it was bought by the manager of a large trading company who sent it to his brother in St. Paul.

IN THE STOCK ROOM

Furs are constantly under scrutiny in order that moths may be kept out. The superintendent is standing at the raccoon section

DOG-TRAIN AND CARIOULE

Outfit of a Fur "Crœsus"

STONEY INDIANS WEARING THE RICH OTTER AND ERMINE TROPHIES

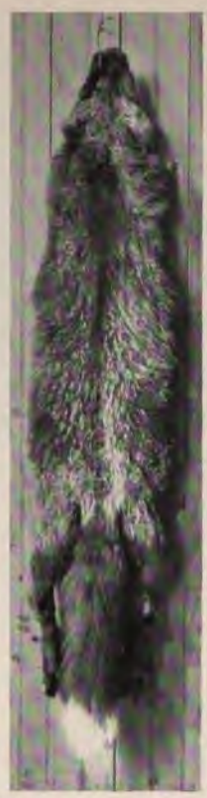
Freaks of fashion give a keen speculative turn to transactions in furs. One dealer, with a perverse and abiding faith in the value of mink skins, began buying these pelts in 1860, paying about nine dollars each. The demand began to diminish but he continued to buy. Mink then went so completely out of fashion that he was able to secure good skins at twenty-five cents each and he continued to increase his stock until it reached 6,000. He stored them. At the end of twenty-three years, his patience was rewarded by the restoration of this kind of fur to popular favor, and he closed out his holdings at a profit of $25,000.

A SMALL BUNCH OF SABLES
Worth one thousand dollars

No topic has greater favor among fur dealers than the happenings of the "old days" when millions of buffalo robes were brought in from the plains and no Western man was so poor as to be without a buffalo coat. Although several excellent substitutes for the buffalo coat have been devised, not one has all the good qualities of that weatherproof garment. The skins of the American coon, the Russian calf, the Chinese dog, and the Australian "bear," or wombat, fill the place left vacant by the bison. Missouri and Michigan are the banner "coon states" in the amount of production, while Minnesota leads in the quality and the size of the pelts. The best skins, made into

PRIMITIVE TRANSPORTATION IN THE FUR REGION
The moose carries a heavy bale of packed furs at a lively pace where the roads permit.

coats, go to New England. The wearing quality of the coon skin is remarkable, coats of this material being in fair condition after twenty years of active service. Hostilities on the torrid plains of South Africa and the bleak steppes of Northern Asia have conspired to make the American farmer, car driver and teamster pay an advanced price for his big winter coat of fur. A large share of the recruits which Australia has furnished to England's fighting force has come from the plainsmen who have been the principal hunters of the wombat. The importation of these skins has been materially decreased from this cause. Raising dogs is one of the principal industries of Manchuria and this enterprise has been greatly interfered with by the Russian army of occupation. The flesh of these dogs is used for food and millions of their skins are floated down canals to Neuchwang and other centres of the trade. A complete dogskin, as it appears in St. Paul—which handles more of these pelts than all other markets of the world combined—is a square of pieces loosely stitched together, some of the fragments being little larger than a postage stamp. The number of these coats in use is suggested by the fact that almost half a million of the raw skins are each year brought to St. Paul in bales, each bale containing 800 pelts.



SILVER FOX SKIN
The costliest fur in the world

Of fine American furs the sable, the fox, the sea-otter, the otter and the fisher are the best. A fine specimen of the black fox easily commands more than $1,000, and a good "silver gray" readily brings half that amount. Sables are graded with fine discrimination. After a certain standard of excellence is reached, fine points of color and "coat" not easily noticed by a layman command a high premium.

In various ways the fur trade encounters the currents of popular superstition. There is a considerable sale of robes and garments made from the common house-cat. This demand comes from persons of rheumatic tendencies who believe that the fur of the domestic tabby has great curative powers. Other sufferers from the same affliction hold that the rabbit has higher curative qualities. These garments are worn with the fur inside.

TRADING POST VAUDEVILLE
Indian bucks "doing a turn"

Sleeping bags and robes for the use of "Klondikers" and Arctic adventurers and explorers have been made in large numbers since the great exodus to the far North began.

In the early years of the last century furs were brought out of the wilderness of the North to the little trading post which has become the city of St. Paul, in primitive fashion; and they were long upon their journey. Even as late as the sixties the curious two-wheeled Red River Valley carts, as they were called, came down from British America, drawn by oxen and manned by Indians, laden with furs for barter. The pelts come now by rail, but they are the same kind of pelts that used to come by ox-cart or on sledges. Large establishments for the tanning, manufacturing and shipping have grown up, employing hundreds of men and women. At least $3,000,000 worth of furs are made up every year, requiring the pelts from 1,250,000 animals. About 115,000 garments are manufactured each year, and nearly $500,000 are paid in wages.*

In one season one St. Paul tanner dresses 115,000 raccoons, 85,000 Australian wombats, 120,000 Russian, German and American calfskins, though all but 15,000 come from the first-named country, 10,000 otter, 7,000 beaver, 16,000 mink, 10,000 opossum from Australia and 5,000 American, 4,000 wolf, 45,000 muskrat, 75,000 Chinese dogs, 1,500 foxes, 3,500 Galloway cattle, 65,000 marmots, 600 sables and a few seals.

The manufacturing of the furs is carried on in the centre of the wholesale district of St. Paul, in large buildings which serve also as depots for the distribution of the manufactured goods. The work continues throughout the year, though the costlier garments are made up in the summer months, when the styles for the ensuing winter have been decided on. It may be of interest to note that the fashionable furs for the winter of 1901-02 will be, in their order of preference, the silver fox and other foxes, the sable, the mink, the Persian lamb, sealskins, of course, always being in strong demand.

It does not require much space to store the costlier furs in the stockrooms of the manufactories. In one small case, divided into several compartments lined with common tarred paper, I saw $65,000 worth of pelts. One silver foxskin not more than two and a half feet long sold in London a season or two ago for $3,000; another one sold in St. Paul last year for $1,200, while the average price of these costly skins is from $700 to $800 apiece. They are made up into muffs or boas; an opera cloak of them would be worth many thousands of dollars.

When a master workman in a fur manufactory is cutting up skins he is literally cutting money. Skins once passed for frontier money, but their value is now much greater than in the early days, and it would be less costly to cut out a garment from ten-dollar bills than to cut it from some skins. The cutting is quite an interesting feature of the work. To prepare a sable or a mink, for example, the skin must be slashed into strings, narrow pieces more or less irregular in shape, which are afterward sewed together. There may be a thousand pieces in a single cloak, the new and beautiful skins being cut literally to pieces before they are manufactured. The object of this is to lengthen the skins. A sable, for example, say two feet in length, will be drawn out to four feet and all its markings preserved, so that it looks like a very long but well-proportioned skin. The original skin is so cut to pieces that it may all be "matched" again in the elongated shape. Not only are good taste and skill required in the cutting of these costly furs, but superior judgment as well, in order that there be the smallest possible loss.

*Not all the furs made up in St. Paul come from animals native to North America. The following is a list of the more important furs manufactured there: Astrakhan, gray krimmer, Asiatic Russia; nutria, South America; Persian lamb, Western Asia; conies and hares, Belgium, France, Australia and Russia; marmot, Russian and Western Asia; foxes—silver, white, blue, red, gray—Alaska, British America, Northern United States, Japan, Russia; baum marten, stone marten, Northern Europe; hair seal and wool seal, North Atlantic and North Pacific Oceans; sea otter, North Pacific Ocean; wombat, kangaroo, wallaby, Australia; skunk, North America; beaver, bear, badger, fisher, Northern United States and Canada; otter, United States, Canada and Japan; wolverine, musk ox, lynx, Canada; sheep, United States and Canada; wolf, Russia, Canada, United States; mink, United States and Canada; muskrat, wildcat, raccoon, United States; ring-tailed cat, California; American marten, Northern United States, Canada and Alaska; together with these skins whose names designate their country—Hudson Bay sable, Russian sable, Russian, Bulgarian and Thibetan lambskins; American, Russian, Holland and German calfskins; Chinese goat and dog skins; Australian and American opossum.

GEORGE W. PERKINS

THE STORY OF A MAN'S RISE FROM OFFICE BOY TO FINANCIAL POWER BY HUMAN TOUCH IN BUSINESS LIFE — AN INTERNATIONAL REPUTATION AS AN UNDERWRITER — A NEW CAREER AS BANKER

BY

WILLIAM JUSTUS BOIES

MR. PERKINS is a typical young American; he has succeeded by means of push, not through a pull. He began at the age of fifteen with a broom in the office of a life insurance company in Cleveland. Those were the days when as an office boy he set out to master the intricacies of the old-fashioned life insurance policy which baffled the intelligence of a Philadelphia lawyer to tell what it did not mean. After that he joined the agency force, and he became known as the youth who could sell insurance to men who did not want it. In this he succeeded admirably, laying up a considerable sum of money and more valuable experience; for of all vocations in this busy old world where the personal equation looms large, none affords it greater scope than the "catching hold" of life insurance. The man who succeeds learns about handling men.

Young Perkins soon grew out of mere soliciting and was given charge of the business in several Western States. That made him commander-in-chief of a small army of men, who, under his leadership, turned in so many millions of insurance a year that his superiors at the home office began to wonder how it was done. They learned little about statistics but a good deal concerning the hypnotic effect of a pleasant countenance, lighted by piercing eyes, and words that instantly arrested the listener's attention. That was about the time that American push and enterprise coined the word "hustler" to describe the genius for hard work at a mile-a-minute gait. So his employers only chuckled a bit and changed a figure or two in his salary account. Young Perkins was then at the age when other young men were attending afternoon teas and betting their father's money on yacht races.

He was soon made third vice-president of the company that he served. Perkins was only thirty then, but the president gave him entire charge of the agency force. That included men of all ages, from the Lord Fauntleroys to the grandfathers of the business, but before the third mail went out most of them knew that they had a man to deal with. They were the picked agents of Europe and America, but Perkins picked them finer, sticking pins into the drones and urging the workers to greater achievements. He studied the habits and make-up of his men. He learned to know them through and through. Then he organized them into groups and subdivided into classes those whose mental capacity seemed equal to the difficulties of landing $100,000 risks. That gave him a corps of specialists and saved him the mortification of having to hear the tale of woe that a boy always tells when he fails to do a man's work. The effect of this on the field force was marvelous. His men began to work like tigers. They loved him. They were proud of him. They did his bidding. Applications for insurance poured into the home office by the thousands, and grit, self-reliance and industry yielded heavy dividends.

In speaking of his success as an organizer, the president of his company said: "Perkins can handle men as no other man I ever knew. He sweeps everything before him. He has enthusiasm, snap, and great perseverance; he never knows when he is licked." But it was up-hill work. He suffered numerous hard knocks. No one ever directed the movements of 20,000 men without discouragements, but obstacles only sharpened his wits, increased his ambition, and made him hang on like grim death. He never asked an agent to work harder than he did, for with him life meant toil, toil, toil. Yet he loved scarcely anything better than work. He was ever on

the alert for new ideas. When precedent obstructed a better way of doing things, precedent had to go. He would not be tied down. If a subordinate proposed a good scheme, his chief pushed it along, giving full credit for the suggestion. His weekly "pointers" to the field force on how to get business went home like a shot. One, containing the obituary of Mr. I Procrastinated Toolong, gave him a reputation for epigrammatic utterance and for clear analysis. He never minced matters with his men. They were sure to hear from him when they did well, and always when they did poorly, so he kept in close touch with all around. Having advanced through the grades of bookkeeper, cashier, agent, agency director at Denver, inspector of agencies, third vice-president, and second vice-president he knew the ropes by heart.

But he never underrated a competitor. When a rival got out a new policy Perkins took thirty minutes to study it and generally improved on it. An instance of his quickness in doing things is related in the West where he chanced to see one day an advance copy of a new policy that a rival company was soon to issue. He took it in at a glance and distributed copies broadcast throughout the land before his competitor knew it; and he made a more liberal policy for his own agents to sell.

When the war with Spain broke out, and policy holders by the thousand were ordered to the front, the insurance companies had to consider the awful hazards of military service. Statistics showed that ten men thus exposed died of disease to one killed in battle, and that under such conditions the death rate of a tropical climate was apt to be large. The companies did not know what to do about it, but the company which Mr. Perkins served sent agents everywhere for business with the announcement that new risks would be written irrespective of war-risk conditions. That meant that men could insure against the vicissitudes of future wars with the knowledge that their premiums would never be raised, no matter how general the disturbance. The idea took like wildfire. Excitement then was at fever-heat and every one became impressed with the necessity of protecting his family. Thousands of policies were applied for by people who, under normal conditions, never thought of insuring their lives, and before the flurry was over Perkins's agents had written enough insurance, it is said, to yield his company an enormous profit had every policy holder then exposed in battle been killed on the spot! As it was, scarcely fifty were injured.

In 1895 a crisis was reached in the insurance situation abroad that precipitated the complications which brought Mr. Perkins into international prominence. American Life Companies, which had built up a lucrative business in Prussia, were suddenly subjected to what they thought were burdensome exactions. The Government stipulated that it must approve of any changes contemplated in the by-laws of a company to make them effective; that a foreign company's premium rates and reserve basis should be first passed upon by imperial experts; that no foreign company should loan funds on unimproved real estate, farms, hotels, theatres, churches, breweries, factories, mining or industrial enterprises wherever located; that no foreign company should exceed the expense allowance provided for by the loading in the premium rates; that no portion of a company's assets should be invested in stocks or second mortgages; that no company should acquire, except in foreclosure, more real estate than it then held; and that the Government should have the right to inspect a company's books whenever it saw fit to do so. Other restrictions were attempted and a general misunderstanding followed. The controversy became a subject of diplomatic negotiation between the Washington and Berlin authorities, but to no purpose. American companies were ultimately forced to abandon the territory.

After two years of long-range correspondence, Mr. McCall, the president of the company, sent Mr. Perkins to Berlin direct. Going straight to the Minister of Finance, he explained matters to him and asked for a re-opening of the negotiations. The request was granted. Then a committee of experts reviewed the different phases of the case, inquiring fully into all the details. The examination was searching in the extreme. It took in pretty much everything of importance from the methods followed by American companies in securing business to the merest detail of technical bookkeeping. After such preliminaries the Government decided to

send a royal commission to this country to examine the company's work at its home office. The commission appointed was probably the most distinguished body of men ever detailed for such work. They reported in favor of the application. The negotiations attracted attention at insurance centres everywhere; their successful outcome was largely due to Mr. Perkins's straightforward policy in securing recognition of his company's claim.

Mr. Perkins also represented his company before the royal officials of Austria and Switzerland. There, too, the mission was difficult, requiring tact, good judgment, and executive skill. But he triumphed in both instances. This country's entrance some years ago into the realm of international finance was due largely to Mr. Perkins's shrewdness in negotiating the Russian loan. This happened when he was thirty-five. Two years later European financial centres ridiculed the suggestion that New York would finance the German loan. But it did. Under Mr. McCall's instructions Mr. Perkins negotiated to take $5,000,000 immediately; that gave impetus to the movement and the balance was placed in a few days. J. Pierpont Morgan, hearing of Mr. Perkins's success sent for him. Impressed instantly with his strong personality he offered him a partnership in his firm. Mr. Perkins accepted it. That was last March. Since then he has helped to organize the great steel trust, made an important trip abroad, and became identified with the leading movements of the nation's money centre. Although he is but thirty-nine years old his fame as a banker bids fair to equal soon the international reputation that he has gained as an underwriter.

Of Mr. Perkins a man who has followed his career since boyhood days said: "Perkins's energy surpasses anything I have ever seen in a human being. He can kill four men in a test of endurance, for he turns night into day whenever there is anything important to do. And the surprising thing about it is that he never misses the details in what he undertakes. Most men can crowd matters when they have to, but Perkins is the only double-quick worker I ever saw whose finished product is complete in every particular. When he has a thing to do it is done before you know it; certainly before the competitors know it. I am familiar with fiction, and know something about men, but the true story of how, in the short space of eighteen years, that young stripling converted an office boy's opportunity into an assured income of $300,000 a year is about as remarkable as anything I see in print!" And his business rivals tell much the same story.

Yet Mr. Perkins is by no means a one-sided man or engrossed with business to the exclusion of the higher pursuits that fill out the well-rounded character. To him, there is no place like home, and to know the man you have to see him at his fireside. There he is at his best. He has been trained in the university of the practical world, and his teachers have been the world's workers. This accounts for his directness and great common sense. By ceaseless energy and being ever on the alert, he has usually reached a given point just ahead of his competitor. Blessed with rugged health he early formed the habit of industry that is fast making him a millionaire. A man thus educated in the school of experience, who braved the rebuffs accorded an insurance solicitor, and came off victor with $25,000 in profits for his first year's work, is bound to know something about the useful art of making friends. And if there is one thing that Perkins is noted for in his own country and in the high commercial circles of England, Germany and Switzerland, it is his grip upon men. He never contemplates them at long range through the luxurious mist of a yacht window, or from behind the ground glass of a private office, but he meets them face to face with the genuine greeting of boyish enthusiasm.

To the poor fools who still think there is no sentiment in business, and that the world is guided wholly by the metallic clang of the cash register, without response to the heart-beats of warm-blooded men, this may seem of small account. But even Wall Street is waking up to the fact that the cut-throat policy always rebounds and often reacts to the injury of those who set it in motion. As one millionaire, whose office atmosphere is constantly below zero, put it: "We cannot 'go it alone' any more. Interests today are so vast, and so closely related, that the independent course is no longer possible. For that reason the golden rule has become largely obligatory whether we want to submit to it or not."

THE BOER WAR TO DATE

WHAT IT HAS COST ENGLAND IN MEN AND MONEY AND DANGER AND LOSS OF PRESTIGE — WHY THE MILITARY METHODS OF THE BOERS MARK A NEW ERA IN WARFARE — THE INEVITABLE BUT POSSIBLY FAR OFF END

BY

JULIAN RALPH

LONG WAR CORRESPONDENT IN SOUTH AFRICA

THOUGH the mass of the English are as tired of the war in South Africa as we Americans are of reading about it, there is, nevertheless, a keen interest in some of its phases. How long will the war go on? What is the fault or the ailment of the British that they have not been able to master an enemy so numerically small? What about Lord Kitchener? These are the questions which are put to me every day, and now the editor of THE WORLD'S WORK asks me these and also other inquiries such as "What has been the cost to England's prestige of this war, and what the cost in money and in men?"

I propose to write fair, truthful, disinterested, absolutely frank views. They will disregard the prejudices and preconceptions of the great majority of men who have no substantial right to opinions which dispute the observations and experiences of one who has lived in the heat of that and other wars, and who has no purpose to serve except to tell the truth, which, in this case, is his stock in trade.

When the war broke out Sir Michael Hicks-Beach offered it as his estimate that the pacification of South Africa would cost $50,000,000 Two years have passed, and on the twelfth of last October a noted London journal published its estimate that the war at that time had cost, in money, $600,000,000. Practically another month has passed, and at $824,000 a day this increases the sum by $24,720,000 and brings the total cost to $624,720,000. To say that no other country in the world, unless it were the United States, could stand so heavy and long-continued a draft upon its financial resources is but to repeat what all the reflective minds in the civilized world had begun to realize almost a year ago. The rate of taxation has been increased, the most pressing public projects unconnected with the army and the navy have been shoved aside; at last the official mind has caught the anxiety, almost desperation, of the public, and we hear a very probable rumor that the volunteers of the United Kingdom are to be mobilized, partly to take the places of all the "regulars" at home and in the peaceful dependencies, and partly to be sent to Africa to spread and thicken the steel hairs of the broom which, thus far, has failed to sweep the veldt clear of the enemy.

How long so rich a nation as Great Britain can continue to expend money at the rate of $800,000 a day, which the war still necessitates, it is not possible to say. No one can tell what strain may be endured by a country which enjoys the bulk of the selling trade and the carrying trade of the world, and which has skimmed the cream of the world's business during a century and a half of unexampled prosperity. But her credit is already seriously impaired. The last issue of consols sent their price down from above par (100) to .92, and another loan is soon to be asked for.

Elsewhere I have already quoted the last letter which has just come to me from a friend in the British army at the front. I will repeat it here. This extract is from a letter by an officer of aristocratic birth, of wide travel, of excellent schooling and of shrewd judgment. I have never anywhere seen so instructive and broadly suggestive an outlook upon the situation as is here presented:

". . . After a fortnight I trekked to this place. There was fighting of all sorts every day, and I have been more shot at in a week than during the past six months. The local Boer is a most pernicious beast. Persistent, too, as he only leaves one kopje to go and snipe from the next. The worst of it is that four out of five of

them have been already prisoners in our hands once, and were released by Gen. ——. May he be haunted by the ghosts of those who have lost their lives through his damnable folly.

"The Boers have been using this basin as a granary and supply depot. When we got here we found many fields ploughed and sown and burghers sitting around on the hills waiting for their crops to grow. One of our duties is to impede the course of agriculture. This will be effected, I expect, by building blockhouses all over the place whence the 'simple farmer' will be sniped when trying to weed or to harvest.

"The change of surrounding company has given me a fresh lease of life. I was quite bored with the war last trek, and was anxious to get away. I don't mind so much now. But it is tedious work, and the amount of stock, grain and Boers seems inexhaustible. I cannot conceive what the devil they ever wanted to import any supplies for at all.

". . . They (the heads of the army) seem to expect us to do every sort of thing with very few men, and the headquarters people at Pretoria have no idea what a lot of Boers there are and what an infernal country."

If you add one other view to this almost photographic picture of a section of the veldt, you will be well informed. The other view I recommend is one that takes in the whole desert country—for little better than a desert can you call the greater part of the arid, treeless veldt. Looking over the whole scene you see, perhaps, 180,000 men forming a human fence along the trunk line from Capetown to Pretoria, and its branches to Kimberley, Durban and Port Elizabeth. They are as valiant fighting men as the world knows, but they must, perforce, do this thankless, tiresome work of guarding the lines of communication against dynamiters, rail-lifters, bridge wreckers and armed posses of burghers bent upon killing the passengers, or looting the goods, transported by the trains. Still looking down on the enormous seat of war you see a thickening of the British soldiery on the Cape Colony border of the old Free State where other troops were concentrated at the outbreak of the war for the self-same purpose which actuates their being posted there still—to keep the burghers out of Cape Colony. In the old Colony with its two-to-one population of Boers, the eye catches glimpses of hastily moving little commandoes of the enemy, looting horses and grain, attempting to arouse rebellion and forever moving on and on, out of the reach of larger bodies of pursuing British soldiers.

Wherever there was war two years ago there is still disorder, martial law or desultory fighting, except in the capitals and larger towns and in the Colony of Natal. That colony alone is at peace. It is the richest agriculturally and the most British and most loyal of all England's holdings in South Africa. The Boers have been chased away and no chance of spreading disaffection tempts them back. There alone do we see the farms under the plow, the workshops busy, the stores doing a normal business and the people gathering strength to meet the new conditions which must rule the land. I say *must*, for England must persist in this war and must win it in the end or her greatness will shatter like a glass dropped upon a rock. Must, or her colonies will leave her and prefer to carve their own fortunes rather than risk such neglect and such blind and blundering statesmanship as all but broke the hearts of the loyalists in South Africa before this war came and offered them their last chance to live as freedmen under a fair, modern, impartial government.

It is after such a survey of this hopeless looking field of unceasing war that we should pause to consider what it has cost to bring peace to one small colony and a few such capitals as Kimberley, Johannesberg, Pretoria and Bloemfontein. In money we have seen what the outlay has been. In loss of human life and damage to the sound bodies and liberties of Britain's soldiers our last official record is one that was published early in October. Of officers killed in action there were 548, while 5,823 privates suffered the same fate. The wounded were 1,529 officers and 28,032 men. Of missing men or men taken prisoners there have been 365 officers and 9,177 privates, of whom 354 officers and 8,471 men have escaped or been released. The harvest of those diseases which always flourish in armies was 10,738, including a very few deaths by accidents. England has therefore lost by death 17,109 men and misses the services of 29,561 men who have been wounded, as well as of the 717 men who are still missing, either as captives or as dead.

The Boers issue no reports of this kind which reach the public, and, if they did, they would be of almost no value. Believing that

they began the war with 40,000 men and that 13,000 or 14,000 men are still in the field (personally, I do not believe there are 10,000 men under arms), it would seem that 26,000 or 27,000 Boers have been killed, wounded and captured or have returned to their farms and shops. I make 40,000 men the basis of this calculation, but the original mobilization of the burghers has been estimated as high as 45,000 men. Then, too, there have been continual leakages of British subjects of Dutch blood over the borders of the English colonies. A year ago as many as 8,000 men were said to have gone to the war on the Boer side from Cape Colony alone.

As to England's loss of prestige, it has been very great—just at present and with the uninformed public. Her worst fault, which neither time nor argument can justify, was her peculiarly Anglo-Saxon condition of unpreparedness. She does not stamp "In God we Trust" upon her coins and let it go at that, as does one other country with which we are all acquainted. But the same motto hangs in dematerialized, spiritual form in every English home and every office of that Government. Not "trust in God and keep your powder dry," but trust to luck and pull through all right, as we always do pull through—that is the motto of the Anglo-Saxon whether he is confronted by a war with Spain on one side of the Atlantic or a war with the Boers on the other. For years the Boers outfitted for war on a scale befitting a powerful and warlike nation, and yet the English—even Cecil Rhodes who was on the spot—flattered themselves that there would be no war. For this neglect of ordinary caution, this crass stupidity, the English Government is to blame, and the blow thus dealt to its own pride and place among the nations was deservedly humiliating.

But here comes what can be only an individual opinion, unfortified and impossible to prove—no other power in Europe, unless it is Russia, could have done nearly so well in South Africa as the British have done since they landed their first armies there. Why do I venture so bold an assertion? It is because the Boers are the first to wage war on an extensive scale with the newest appliances, and because they suited their modern apparatus to their own informal, primitive, unschooled methods in a land as naturally defensive as the rocky sides of the Swiss Mountains or the rude surface of the Balkan states. Yes, more easily defended, more fitted for a defensive force than either of those territories. Nowhere else that I have been, except in Southern Colorado and Arizona, is there to be found a vast waterless region, cut every here and there by huge cracks in the earth that are capable of hiding armies, dotted with rocky hills, sprinkled with rock-strewn areas, subject to extreme heat and extreme cold, even within a period of a single day, and necessitating the transportation of all the necessaries of life, even of water.

"Just at present," I said, "and with the uninformed public" England's loss of prestige must be very great. The military experts of Europe and the United States will not so condemn her. They know that the rapid-fire magazine rifle with a range of more than a mile for accurate shooting, and with smokeless powder to hide its whereabouts, has revolutionized warfare. The old science of fighting one army with another has become a new science today. Modern warfare was born in South Africa in November, 1899, and the Boers delivered the new baby into the world. Russia might have sent her millions swarming upon the veldt to massacre the inhabitants of the villages as they did in Mongolia last year. That might have quickly ended the war. Japan might have repeated her methods at Port Arthur with the same result.

But what of Germany, Austria and France? They have not had the schooling in rough and unconventional warfare which the British have had on both coasts of Africa, on India's frontier and elsewhere. No European nation has ever been forced to bend its etiquette of fighting to meet such conditions as Great Britain has often encountered of late. It is true that only a small part of the English army has been engaged in wars with savages, but that is more than has fallen to the lot of any nation except Russia. For when the Italians were so disgracefully beaten by Menelik in the hinterland of Abyssinia they met a fairly orderly army trained to European methods. The Germans neither knew nor believed in any mode of fighting except by the movement of great bodies in close order as when they won the war with France. To have engaged the Boers in that way would have been to lose men as Methuen lost his men at Belmont,

Graspan, Modder and Maghersfontein; for Methuen is an old-fashioned soldier who believes the methods of Wellington are still good enough for him. He is the sort of soldier that perpetuates the old idea of "dying for the King," whereas your modern master at war—your Boer—believes in killing the enemy and keeping your own skin whole. Neither England nor any other nation will ever again send men to war with the absurd injunction, "Go and die for your country." It is too easy to die. The real art is in killing the other chaps and living to do it again.

The Germans and the French would have died by wholesale. And since every lesson that had been drilled into every officer's head for years would have had to be unlearned, we may be sure the process of unlearning and then relearning would have taken a long time. They are not pliable—those automatic, machine-like officers of the armies of Europe.

The Colonial rough rider and the regulars from Northwest India leavened the British lump. They taught that army how to meet the new conditions, and for eighteen months the British have been fighting Boer fashion—which is to say, red Indian fashion, rough rider fashion. They threw away their swords six months earlier than any soldiers in continental Europe would have so disencumbered themselves. They humbly and modestly copied the methods of the Australian bush-whackers and Canadian ranchmen, and I mean no offense to the German officer when I say that I cannot imagine him doing so: throwing away all that he had been taught, in the time in which the English did it Because the English are more clever? Not at all; indeed, at old-fashioned warfare their dilettante, sporting, unprofessional, unscientific officers would have been no match for the Germans. No, they learned to suit themselves to the new conditions so quickly because of their previous tastes of rough warfare, because they were sportsmen rather than professional life-time soldiers.

It is the fashion in some quarters to express sorrow for the Boers, yet it may be strongly argued that sympathy for the British would be more justly placed. The Boers wanted this war and had wanted it ever since their Majuba Hill victory, to say the least. They prepared for it with lavish outlay. They began it by invading the British colonies. They had everything to gain and little to lose. The British had little to gain, for the Boer republics are little better than desert land, and Great Britain holds but one-sixth of the stock of the Rand treasure pits. The wail of the misgoverned Uitlanders, echoing our protest of '76 against taxation without representation, supplied the English the strongest battle-cry they had. Two years have passed. The best blood of England has run in rivulets, her treasury has been depleted, her credit has sunk alarmingly. She has encountered new and apparently insurmountable developments in the science of war at the very moment when the balance of trade is passing out of her hands. Her harshest critics do not hesitate to say that she will yet become bankrupt and that her Liberal party will soon force her to withdraw and leave the field to the Boers. I cannot take anything like so gloomy a view of the case, yet it is soberly stated by even English pessimists. To withdraw from the conflict would mean not only the loss of England's South African colonies, but perhaps the secession of Australia first and Canada later.

She may be deserving of sympathy for another reason which is too little understood. Germany and France were wont to look with alarm at the swelling and pugnacious arrogance of the Boer republics. Those nations and our United States desired "the open door" for commerce in Africa as elsewhere. It fell to England to play the part of cat's-paw for the rest of Christendom to pull that chestnut out of the fire.

The British have made a serious mistake in concentrating the Boer women and children in camps and caring for them generously. Those who know the Boer understand that this simply leaves him care-free, to go on fighting the longer. It is not as good a plan as has been suggested by one celebrated colonist who urges that all the refugees be escorted, under guards, back to Johannesberg, that the mines be opened and worked and the shops be made ready for business. Instantly, he says, a great peace area would be formed by Boers anxious to grow food and raise cattle for this busy town. And every day the peace area would widen until all the Boers, envious of the first to yield and heartily sick of fighting, would settle back upon their ranches.

DEER SWIMMING

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CAMERA SHOTS AT WILD ANIMALS

THE EXTRAORDINARY PHOTOGRAPHS BY MR. A. G. WALLIHAN OF COUGARS, DEER AND OTHER WESTERN GAME, IN THEIR NATIVE HAUNTS

BY

THEODORE ROOSEVELT

[The following article consists of extracts from the Introduction to Mr. A. G. Wallihan's forthcoming volume, "Camera Shots at Wild Animals," and this Introduction was written by Mr. Roosevelt early last summer.]

MR. WALLIHAN'S photographs of wild game possess such peculiar value that all lovers, whether of hunting or of natural history, should be glad to see them preserved in permanent form. The art and practice of photographing wild animals in their native haunts has made great progress in recent years. It is itself a branch of sport, and hunting with the camera has many points of superiority when compared to hunting with the rifle. But, even under favorable conditions, very few men have the skill, the patience, the woodcraft and plainscraft which enabled Mr. Wallihan to accomplish so much; and, moreover, the conditions as regards most of our big game animals are continually changing for the worse. The difficulties of getting really good and characteristic photographs are such as to be practically insuperable where game is very scarce and very shy, and throughout most of the United States game is steadily growing scarcer and shyer. Photographs in a game preserve, no matter how large this preserve, are, of course, not quite the same thing.

The elk have now diminished in numbers, so that it would be very difficult indeed to get pictures like some of Mr. Wallihan's, and,

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AN ELK IN THE SNOW

though the blacktail and the antelope last better, yet they, too, can nowhere be found as they were but a dozen years ago. The cougar pictures have an especial value. Where cougars are plentiful it is easier to take their photographs than in the case of deer, and there are a number of localities in the Rockies where they are still fairly abundant; but they are steadily growing scarcer, and where they have become really scarce the work of the photographer becomes one of such hopeless labor, the chance for success is it is not possible to choose the conditions of ground and light in advance.

Mr. Wallihan's hunting was in Northwestern Colorado and Western Wyoming—regions where I have often followed the game he describes. There are no whitetail deer in the country he covered, the buffalo were extinct before he began work with his camera, and he never had luck with bears. But his series of elk, antelope, blacktail and mountain lion pictures leave little to be desired.

The elk, or wapiti, were still plentiful in

ANTELOPE

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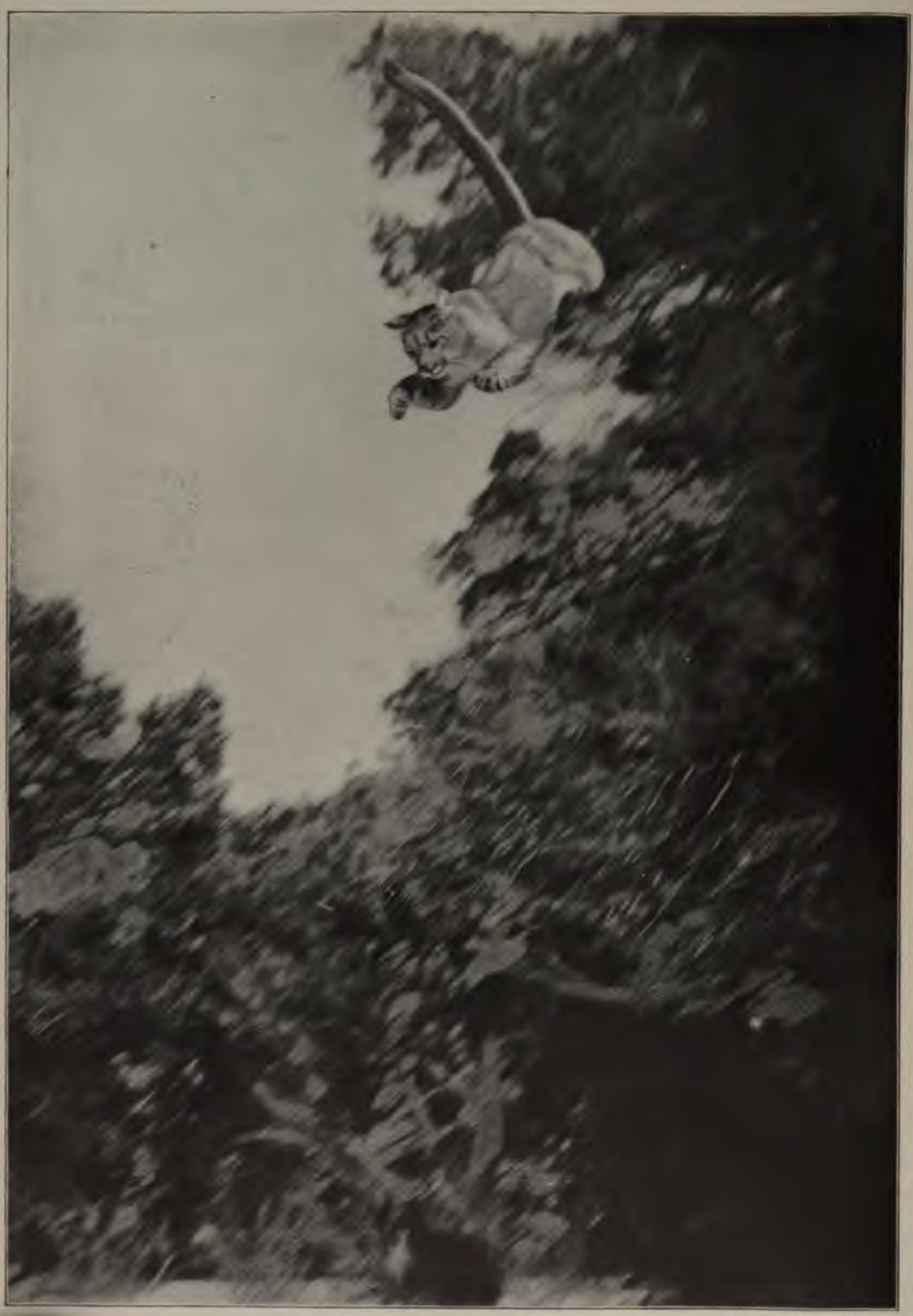
so very small, as to be practically prohibitive. There are still cougars east of the Mississippi, but nowadays it would be a simple impossibility for any man to take of them such pictures as Mr. Wallihan has taken of the Colorado cougars. Moreover, even where cougars are plentiful, the photographer might work a lifetime before getting such a remarkable picture as that of the cougar jumping in midair. As I know from practical experience, it is exceedingly difficult, even when the cougar has been treed, to get a really fine photograph, as

Northwestern Colorado a decade ago, going in large herds. The merciless persecution they have suffered for the sake of their flesh, hide, antlers and teeth has resulted in the species being reduced to a few hundred individuals. The Wyoming elk are traveling the same path, although the existence of the great protected nursery and breeding-ground in the Yellowstone National Park has delayed the process and gives us reasonable hope that the animals will never become entirely extinct. The part played by true sportsmen, worthy of the



A COUGAR LEAPING

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name, in this extinction has been nil, and indeed very little appreciable harm has been done by any men who have merely hunted in season for trophies. The real damage has come from the professional hunters and their patrons. In a wild frontier country it is too much to expect that the settlers will not occasionally kill meat for their own use, though every effort should be made to educate them to the knowledge that a wapiti or deer free in the woods will, by attracting tourists, bring into the neighborhood many times as much money as the dead carcass would represent. The professional game butchers, however, have no excuse of any kind. They kill the animal for the hide and for the flesh. Moreover, the horns are strikingly ornamental and are freely purchased by a certain class of wealthy people who wholly lack the skill and hardihood necessary to those who would themselves be hunters, and who have not the good taste to see that antlers properly have their chief value as trophies. Nothing adds more to a hall or a room than fine antlers when they have been shot by the owner, but there is always an element of the absurd in a room furnished with trophies of the chase which the owner has acquired by purchase. Even less defensible is it either to kill or to put a premium upon the killing of this noble and beautiful creature for the sake of its teeth. Yet the habit of wearing elk's teeth on watch-chains and the like has been responsible for no small amount of slaughter. The Audubon societies have done useful work in trying to prevent the destruction of song-birds and waders for millinery purposes. It would be well if some similar society would wage war against the senseless fashion of wearing elk's teeth when the wearer has not shot the animal; for such a fashion simply becomes one cause of extermination.

Some of Mr. Wallihan's most beautiful pictures are those of deer crossing a stream. In dealing with the prong-horn antelope, on the other hand, a shy and far-sighted creature of the dry, open prairie, almost the only chance consisted in catching the game when it came to drink. Mr. Wallihan is a very close and accurate observer, as indeed it was necessary he should be in order to obtain such results.

In Mr. Wallihan's cougar-hunting he had the good fortune to be associated with Mr. Frank Wells, a first-class hunter, with an excellent pack of hounds. Mr. Wells is not only a good hunter, but a good observer. He has written two or three pieces about cougars and cougar-hunting which are filled with refreshing common sense, in striking contrast to the average tales on the subject. More nonsense has been talked and written about the cougar than about any other American beast. Even experienced hunters often gravely talk of cougars ten and eleven feet long. As Mr. Wells has pointed out, these figures are never even approximated. The animal is variable in size, and very rarely a monster old male will reach the length of eight feet; but by no system of fair measurement will any cougar ever be found to go more than a very few inches over this limit, and an eight-foot cougar is a giant of its kind. Hardly one in a hundred reaches such a length.

Mr. Wallihan is not only a good photographer, but a lover of nature and of the wild life of the wilderness. His pictures and his descriptions are good in themselves as records of a fascinating form of life which is passing away. Moreover, they should act as spurs to all of us to try to see that this life does not wholly vanish. It will be a real misfortune if our wild animals disappear from mountain, plain and forest, to be found only, if at all, in great game preserves. It is to the interest of all of us to see that there is ample and real protection for our game as for our woodlands. A true democracy, really alive to its opportunities, will insist upon such game preservation, for it is to the interest of our people as a whole. More and more, as it becomes necessary to preserve the game, let us hope that the camera will largely supplant the rifle. It is an excellent thing to have a nation proficient in marksmanship, and it is highly undesirable that the rifle should be wholly laid by. But the shot is, after all, only a small part of the free life of the wilderness. The chief attractions lie in the physical hardihood for which the life calls, the sense of limitless freedom which it brings, and the remoteness and wild charm and beauty of primitive nature. All of this we get exactly as much in hunting with the camera as in hunting with the rifle; and of the two, the former is the kind of sport which calls for the higher degree of skill, patience, resolution, and knowledge of the life history of the animal sought.

A STOREHOUSE OF INDUSTRIAL FACTS

THE WORK OF THE INDUSTRIAL COMMISSION AND ITS VOLUMES OF REPORTS THAT THROW LIGHT ON ALL THE MOST IMPORTANT COMMERCIAL AND SOCIAL SUBJECTS OF OUR ACTIVE LIFE

BY

E. DANA DURAND, PH. D.

SECRETARY TO THE COMMISSION

ON December 15th the United States Industrial Commission will end its existence, and the results of more than three years of its investigations will be submitted to Congress. The Commission, composed of five Senators, five Representatives and nine appointees of the President, with Mr. Albert Clarke as Chairman, was created by act of June 18, 1898, which directed it to investigate immigration, labor, agriculture, manufacturing and business, and to suggest to Congress such legislation as it might think best.* Surely it had no need to sigh for other worlds to conquer. Probably no commission ever had such a comprehensive field of inquiry; and no other wide-reaching investigation of industrial conditions was ever undertaken at a time so full of great economic problems.

The object of the Commission is a double one—to investigate, and to make recommendations to Congress and to the State Legislatures. A vast amount of valuable information about economic conditions and problems had already been presented by State and national government departments, as well as from various private sources, but our busy legislative bodies have little time to digest this information and to reach conclusions as to its lessons or as to needed legislation. The Commission has accordingly condensed and made available much material of this sort, and has studied it as a basis for conclusions and recommendations. An immense amount of oral testimony has been taken, and various special investigations have been made at first hand under the Commission's direction. The extent of its work may be judged by the fact that (aside from the final volume containing recommendations) the reports fill eighteen closely-printed octavo volumes, averaging approximately one thousand pages each. This information will be for years a valuable storehouse for statesmen, economic students and journalists. Whatever may be thought of the Commission's conclusions and suggestions for legislation, when they shall be made public, the welcome which has already been given to the volumes of testimony and to the special investigations shows that the Commission has served a useful and opportune purpose.

WITNESSES

The greatest amount of space in the Commission's reports is given to the oral testimony of witnesses who have appeared before it and before the various special committees, which it has sent to the different parts of the country. Six hundred and seventy witnesses have been heard. They represent almost every class and section in the country. The Commission has offered an open forum for the presentation of grievances and the discussion of problems. At the same time, a great majority of the witnesses have come, not on their own motion, but at the invitation of the Commission, which has taken

*The Commission consists of nineteen members (reduced to eighteen since the untimely death of Senator Kyle). They are: Chairman, Albert Clarke, Boston, secretary of the Home Market Club. Senators: Penrose, of Pennsylvania; Mallory, of Florida; Daniel, of Virginia, and Bard, of California. Representatives: Gardner, of New Jersey; Livingston, of Georgia; Bell, of Colorado, and Otjen, of Wisconsin. Mr. William Lorimer, of Illinois, who was a member of Congress when the Commission began its work, retained his position after the end of his Congressional term. Presidential appointees: Mr. A. L. Harris, Eaton, Ohio, farmer and former Lieutenant-Governor of Ohio; Mr. J. M. Farquhar, Buffalo, N. Y., former president of the International Typographical Union and ex-member of Congress; Mr. E. D. Conger, Grand Rapids, Mich., editor of the Grand Rapids *Herald*; Mr. T. W. Phillips, New Castle, Pa., oil producer and ex-member of Congress; Mr. C. J. Harris, Dillsboro, N. C., manufacturer; Mr. J. L. Kennedy, Washington, D. C., former president of the Columbia Typographical Union; Mr. Charles H. Litchman, Marblehead, Mass., former general secretary-treasurer of the Knights of Labor; and Mr. D. A. Tompkins, Charlotte, N. C., mechanical engineer and manufacturer. The Commission is divided into sub-commissions on Agriculture, Manufactures and General Business, Transportation and Mining.

pains to select those whose information would be most valuable. In the investigation of trusts and industrial combinations, it has summoned the officers of the leading industrial corporations, such as Mr. Schwab, Mr. Havemeyer, Mr. Archbold and Mr. Flint, while the testimony of the leading competitors and opponents of the combinations and of disinterested students has also been secured.

The transportation testimony includes the evidence of the representatives of the great railroad systems, such as Mr. Callaway, former president of the New York Central; Mr. Spencer, president of the Southern Railway; the late Mr. George R. Blanchard, commissioner of the Joint Traffic Association, and many other railroad presidents and traffic managers. Great railway and corporation financiers, such as Mr. Jacob H. Schiff and Mr. E. R. Chapman, have also given testimony. Representatives of the leading boards of trade and organizations of shippers throughout the country have been heard, as well as expert statisticians, journalists and students of transportation questions. The officers of the brotherhoods of railway employees and other representatives of railway labor have given testimony in detail. Indeed, the conditions of labor in all branches of industry have received special attention. Officers of the leading labor organizations, such as Mr. Gompers, president of the American Federation of Labor; Mr. Mitchell, president of the United Mine Workers, and Mr. Shaffer, president of the Amalgamated Association of Iron and Steel Workers, have discussed labor questions, as have also many employers and many disinterested persons. Capitalists and business men have testified regarding the problems which confront them; farmers and representatives of farmers' organizations and of agricultural boards have discussed agriculture; leading educational workers have discussed technical education, the education of the Negro, and like problems.

DIGESTS AND INDEXES OF TESTIMONY

The criticism is often brought against the reports of Congressional committees and governmental commissions, that so huge a mass is presented without logical arrangement, summary, or adequate index, that the ordinary reader is baffled in trying to make use of it, and even the legislator or the special student can get little out of the chaos except by strenuous labor. The Industrial Commission has tried to escape this criticism and to make all the information in its voluminous reports easily accessible. In the case of oral testimony a digest is prepared in which the gist of the statements of each witness on each topic he discusses is separately presented, the whole being logically classified. The digest is full enough, so that in most cases the reader will have no need to turn to the original testimony, although he can readily do so by means of the page references. A review of the testimony is also given in each volume. This brings into still shorter compass the chief statements and opinions of witnesses. These digests and reviews have been prepared with great care by trained experts. They aim to be wholly free from color or opinions, except such as are presented by the witnesses themselves. A full index of the digest and review of each volume has been made, as well as an elaborate, topical index of the testimony itself, while cross references have been inserted in the indexes in such a way that the intelligent reader can scarcely fail to find what he is looking for. The Commission has also in most instances presented concise summaries of the special investigations on various topics, and has furnished them with indexes. One of the distinct public services rendered by the Industrial Commission is the example it has set as to the proper method of presenting information in Government reports.

EXPERT SERVICE

Not only has the work of digesting the testimony been performed by competent economists, but various special investigations have been conducted by experts under the direction of the Commission, and they have in some cases aided in the selection and questioning of witnesses. The Commission has recognized that only by the aid of experts devoting their entire time to special investigations could the wealth of existing material be made available. A large majority of those who have been employed for such work have had university training and are recognized authorities in their respective fields. Among others may be mentioned Professor J. W. Jenks of Cornell University, Professor W. Z. Ripley of

the Massachusetts Institute of Technology, Professor J. R. Commons, Mr. F. J. Stimson, Dr. S. M. Lindsay of the University of Pennsylvania, Dr. J. F. Crowell of the United States Bureau of Statistics, Dr. Max West of the Department of Agriculture, Professor B. H. Meyer of the University of Wisconsin, Miss Kate Holladay Claghorn, Ph.D., and Mr. Charles E. Edgerton, late fellow of Cornell University.

THE TRUST INVESTIGATION

No doubt greater public interest attaches to the investigation regarding trusts—or, as the Commission usually calls them, industrial combinations—than to any other branch of its work. The Commission has taken two large volumes of oral testimony on this subject, and has supplemented it by a number of special reports, several of which have been prepared under its direction by Professor Jenks. These cover, among other topics, industrial combinations in Europe, laws and court decisions regarding combinations (each of these reports constituting a separate volume), the effect of various combinations on prices, the relative prices charged by American producers for the same products in domestic and foreign markets, speculation in securities of industrial corporations, and the relative prices of the products of certain combinations in different localities. The last investigation was made in view of the charge that trusts sometimes cut prices in certain places to drive out competitors who are seeking markets there, while maintaining them at excessive figures elsewhere.

Such special investigations as these, which throw a flood of light on the trust problem, were rendered the more necessary because of the relative inadequacy of the oral testimony presented by others than those connected with the combinations themselves. The great consuming public is the chief party at interest in the trust problem, and the consumers have no definitely constituted spokesmen and few who possess accurate knowledge regarding the nature and effects of combinations. As to some combinations, notably the Standard Oil Company and the American Sugar Refining Company, valuable testimony has been given by past or present competitors; but in other cases the representatives of independent concerns are unwilling to testify, or are able to contribute little information of value. Of necessity, therefore, the greatest number of witnesses on this subject have been representatives of the combinations themselves; and the aim has been, so far as possible, by careful questioning and by securing the production of official papers and statistics, to obtain directly from these witnesses correct knowledge as to the working of trusts.

During the three years of the Commission's work, more industrial combinations have been formed in the United States than during the whole of its previous history. The problems connected with them have grown in public attention; they have become leading features in the policy of the great political parties. During the same years, however, there has been a marked change of sentiment regarding combinations on the part of many people. The indiscriminate condemnation which was almost universally prevalent ten years ago has been abandoned by a large proportion of economists, publicists, and legislators, who now hold that the trust, like most other economic institutions, is neither wholly beneficial nor wholly injurious to society, and that it is a natural economic development which has come to stay. It is felt that the complete failure of the State and Federal laws forbidding them or restricting their formation or operation—a failure which the inquiries of the Commission have emphasized—has been due not so much to faulty construction or to judicial interpretation, as to the absolute impossibility of preventing capitalists from acting in harmony if they desire to do so. It is probable that the publicity given to the methods and effects of combinations by the Industrial Commission has contributed much to this change of public sentiment. The question which most statesmen and students are now setting before themselves, and the question which has sharply confronted the Commission, is not how to "smash the trusts," but how to regulate them effectively, and to limit their power for evil while retaining their benefits.

Representatives of the combinations have painted in strong colors the serious injury alike to employers and employees, and indeed the occasional demoralization of the entire business community, which has accompanied unrestricted competition under modern conditions. In many cases, it has been freely admitted by these witnesses that the desire to

bring competition within limits has been the prime motive for the formation of combinations. At the same time, much evidence has been presented to show the economies in the production and sale of commodities which may result from coöperation, from the removal of unnecessary duplication of service, and from the application of the improved methods and appliances which the command of very large capital makes possible. Many trust managers claim that by means of such economies they have either reduced prices or will do so in the future. For several leading combinations, the Industrial Commission has investigated this claim as regards the past, applying careful statistical methods, which eliminate especially the effect of changes in the cost of raw material, not produced by the combinations, upon the price of the finished product. It can scarcely be said that these investigations fully sustain the position of the managers of trusts as to their effects on prices. Nevertheless they seem to show that most combinations possess by no means so near an approach to complete monopoly as has often been supposed, and that the fear of encouraging further competition is usually a powerful influence tending to prevent extortionate prices.

Very few witnesses, however, except those directly interested in combinations, hold that competition alone is sufficient to prevent all abuses. It is commonly urged that the concentration of such enormous power in a few hands as has been brought about especially by some of the largest trusts, makes it possible practically to crush any effective competition, and renders necessary the restraining influence of law. Not a few trust officers concede the desirability of such legislation within proper limits.

THE VALUE OF PUBLICITY

The widest difference of views appears as to the best methods of regulation. There is, however, a very general consensus of opinion that much would be gained by the requirement of greater publicity regarding the formation and operation of industrial combinations than has heretofore existed. Not only, it is argued, would such publicity form the best possible means of ascertaining the need and the proper methods of further regulation, but in itself it would help to protect investors against misrepresentations as to the value of stocks and the state of business, to enable public opinion to be brought to bear in reprehending abuses, and to invite competition were unduly high profits on actual investment disclosed by the reports of corporations and by public inspection of their accounts.

THE TRANSPORTATION PROBLEM

The period during which the Industrial Commission has conducted its inquiry has been conspicuous also for the rapid movement in the consolidation of railways into great systems, a movement which gives special interest to the investigations regarding transportation. These comprise two large volumes, including testimony and valuable special reports on railway legislation and railway taxation. In its final report, moreover, the Commission has gone outside of the testimony of witnesses, and has summarized a mass of information about the problems of transportation. No one can read the testimony or the final report on this subject without being impressed with the enormous influence exerted by the railways on the welfare of shippers, and indeed of entire industries, communities and sections of the country, or, probably, without becoming convinced of the necessity of adequate public regulation of these virtually public institutions. The insufficiency of the control which the Interstate Commerce Commission is able to exercise, under the interpretation of the courts as to its powers under existing law, is almost uniformly asserted by representatives of shippers, and is admitted by many railroad officers. It is urged that competition in the transportation industry is often by the nature of the case impossible, while many shippers and nearly all railway men declare that where competition does exist it is likely to be carried to such extremes as entirely to destroy profits, and often to lead to most harmful discriminations between individual shippers and between different places. This extreme nature of railway competition is made the ground for a strong argument in favor of the repeal of that clause in the Interstate Commerce Act which prohibits pooling. Many witnesses assert that the refusal of permission to separate roads to agree upon rates or to divide traffic is one of the chief reasons for the recent movement toward the consolidation of, or the establishment of community of

interest between, previously competing transportation lines. It seems clear that railway consolidation has done much to destroy the practice of discrimination in rates.

FOR MORE EFFECTIVE GOVERNMENT CONTROL

Most of those representatives of shippers, and other witnesses not directly interested in railways, who admit the desirability of restricting railroad competition maintain that some really effective Government control over the charges of public carriers is necessary. The rapid extension of consolidation and "community of interest" is held to emphasize this necessity. Opinions naturally differ as to how adequate public control may best be secured. Railway men protest against giving unlimited power to decide the undoubtedly immensely difficult questions as to freight rates to officials who are not directly interested, and who lack the knowledge that only long experience can give. The profound difficulty of securing justice both to the public and to the carriers is obvious. The proposals which have been most commonly advocated before the Commission are first, to give the Interstate Commerce Commission power not merely to declare a given rate unreasonable, but, as it cannot now do, to prescribe a rate which it shall consider reasonable; and, second, to make the decisions of that Commission effective until reversed by the courts, instead of, as at present, leaving conditions unchanged in case the railway appeals, until a final judicial decision is rendered, a process which often involves years of delay in the progress from court to court. Such proposals as these are usually accompanied by the further suggestion that the Commission should be made more thoroughly representative of both shippers and railways, and that its members should be given longer tenure of office and greater compensation, so that their position shall take on more nearly the dignity of our highest judicial tribunals. The requirement of added publicity of railway affairs and accounts, and the establishment of greater control over the construction and financiering of railways are also frequently advocated. Representatives of railway companies naturally deprecate anything which seems to them undue interference, but many of them are apparently willing to submit to further regulation if only they be allowed to enter into agreements restricting excessive competition.

LABOR PROBLEMS

The investigation of the conditions of the working class and of the relations between employers and employees has been one of the chief features of the work of the Commission. An immense amount of oral testimony is presented in the reports on Trusts and on Transportation, and more especially in the two volumes on Manufacturing and General Business and in the volume on Mining. Moreover the Commission has published several very valuable special investigations on labor questions. Among these are a digest of the Federal and State laws relating to labor, a digest of foreign legislation on the same subject (both compiled by Mr. F. J. Stimson), and an investigation of systems of convict labor. Each of these reports constitutes a volume by itself. Another volume contains a very thorough report on railway labor prepared by Dr. S. M. Lindsay; and an extensive one on labor disputes and arbitration prepared by Messrs. Edgerton and Durand.

In the labor inquiry the field covered is wide and varied. Probably the Commission has taken the deepest interest in the problem how to promote peaceful relations between employers and employees, and of systems of conciliation and arbitration. The testimony and special reports of the Commission show that labor organizations are rapidly extending in membership and influence; that formal and informal collective bargaining and trade conciliation and arbitration have been introduced much more commonly in the United States than is generally supposed; and that these practices have, in spite of occasional interruptions by strikes and lockouts, done much to promote industrial peace. Especially noteworthy is the splendid success of the system of interstate conferences between the bituminous coal operators and miners in the four States of Pennsylvania, Ohio, Indiana, and Illinois. Since 1897 strikes in the mines covered by this system have been virtually done away with, while the condition of the miners has been vastly improved, and a spirit of harmony between them and their employers has been established which is a standing example to other industries. Many witnesses urge especially that employers and employees

should settle their own differences in amicable conference or by the decision of boards of arbitration chosen by themselves, rather than resort to persons or boards outside the trade. State boards of arbitration in several states have done much in promoting the settlement of such disputes as have resulted in actual cessation of employment; but there is reason to believe that they never can do much toward adjusting differences before strikes and lockouts occur. It is this latter function which is performed with marked success by trade systems of conference and arbitration.

OTHER INVESTIGATIONS

In the reports of the Commission will be found, also, a mine of information about manufacturing, mining and transportation industries, and the problems confronting those engaged in them. Such questions as the tariff, ship subsidies and taxation are freely discussed. Two volumes are devoted to agriculture, besides a valuable special report on the distribution of farm products, prepared by Dr. John Franklin Crowell. In another report is included testimony on immigration, its social and economic effects, the working of existing legislation, and proposals for further regulation or restriction. This volume contains also an exhaustive first-hand investigation of the economic effects of immigration, prepared by Professor John R. Commons, which is especially noteworthy for its discussion of the relation of the foreign-born to the sweating system, and for its detailed information as to the openings for immigrants in agriculture in the various parts of the country. The Negro problem has also been discussed by many witnesses in the reports on agriculture and manufactures, as well as in the smaller report on education.

The Commission does not itself undertake to distribute its reports in any general way. Congress has ordered a large edition of them for distribution by its own members. Eight volumes only of this Congressional edition are as yet available, but the others will be forthcoming within a comparatively short time.

SCENES FROM A GREAT CAMPAIGN

THE DRAMATIC APPEARANCE OF MR. EDWARD M. SHEPARD IN TAMMANY HALL—MR. JEROME AS A MASTERLY CAMPAIGNER—THE DIFFERENT VIEWS OF THE REFORMER AND THE "PROFESSIONAL"

BY

LINDSAY DENISON

[The recent municipal campaign in New York City had many dramatic incidents and revelations of lasting interest. The development of Justice Jerome as one of the most daring and effective campaigners that ever took the stump and the appearance of Mr. Shepard in Tammany Hall—these are not likely to be forgotten by anybody who witnessed them. Mr. Denison's vivid descriptions are those of an eye-witness.—ED.]

I

THE HOSTAGE OF DECENCY

TAMMANY HALL'S assembly room is unlike any other public meeting-place. It is nearly square. A deep gallery runs from the back far toward the platform at the front, and the platform has a canopy like a hundred-year-old four-poster bed. Floor and gallery were filled with Tammany faces. Here and there were touches of bright color as an uneasy movement disclosed the rolled-up American flag which every man held in his hands. They were like reflected glints from the flags which hung from all the walls and fluttered from the chandeliers and the canopy of the platform and in long rows from the ceiling. In boxes on either side of the platform was a variation in the color and mass—the gay costumes of the comfortable wives and daughters of the "leaders of the organization," who were smiling constantly at their men-folk on the platform.

On the very edge of the platform, at the right of the presiding officer's desk, sat the

Boss, grim and inscrutable. It made one's teeth ache to look at the set of his jaws under his roughly trimmed whitening beard. His necktie, coat and trousers were black; they fitted him none too well. There was a carelessness about his dress that suggested the Richard Croker of the Tunnel Gang, rather than a lately developed gentleman of English tastes visiting his former companions. One and another of his men on the platform waited patiently to meet his eye, and, meeting it, were rewarded with an expressionless nod. He turned awkwardly on his chair and looked over the thousands in the flag-trimmed hall. I. Fromme, one of his most adaptable instruments, leaned heavily on him from the next chair and began to buzz with congratulatory comments. The Boss half turned his head and growled something inarticulate. I. Fromme shrank back, biting his lip.

A bustle was heard at the back of the platform. The big men with leathern faces and gamblers' eyes made way. Between them entered a delicate-looking small man with a white carnation in his coat lapel; the floor rose up, the gallery rose up, the flags unrolled in a fluttering storm and yells began to pierce the air. Take out your watch and follow the second hand for three minutes and a quarter; so long the tumult lasted. All that time the candidate stood there, conspicuously the gentleman and scholar, bowing his acknowledgment to the audience and looking into the unreadable eyes of the Boss. These were they whom he had called "a burning blot" on the fair page of American history. They had nominated him to divide the reform vote, to save the organization from the odium of defeat, even though the full fruits of victory were for a while lost. He was face to face with Tammany's lust to rule.

Another boy and myself trapped a sparrow hawk once; we were to teach it to be a gyr-falcon or something of the sort, but the poor thing died. Not until I recalled the keen-eyed fearlessness of that captured hawk could I explain the feeling that somewhere I had seen Mr. Shepard facing Tammany before.

II

THE UNBOSSED BOSS

A trolley car stopped in the dismal stretch of a Long Island City street. Shrill shrieks tore the outer darkness. By straining the eyes, we could see hundreds of small boys dancing and tossing their arms in the air. Into the car came a big man with an Irish twinkle in his blue eyes and an Irish laugh under his curling moustache.

"Don't know him?" exclaimed the conductor, between incredulity and scorn. "Don't know Joe Cassidy? He's the man Croker's tried to beat for three years and couldn't. If you go to Croker for anything over here in Queens now, he says, 'See Cassidy.'"

Mr. Cassidy took stock of his overcoat pockets. He told one of his lieutenants to be sure to buy him another half-dollar's worth of candy as soon as they left the car. "We can't have the kids stop their shouting," he said. Long Island City breeds such men; of such was Patrick J. Gleason of cherished memory, who fought encroaching corporations not with injunctions but with a company of axe-men, of whom he himself was chief.

Mr. Shepard walked to the front of an Astoria audience in Cassidy's huge shadow. Loud were the cheers. Mr. Shepard bowed. Mr. Cassidy smiled and bit his lip. Mr. Shepard went alone upon the platform and slipped off his overcoat. The cheers died away. Mr. Cassidy stepped forward and took the candidate by the hand. The voters sprang upon the benches and swung their hats at the low rafters and split their throats. The man who had beaten Croker was vouching for the man who had surrendered. It is worthy of note that Mr. Cassidy was the only subordinate leader in all five boroughs who saved his command from the wreck.

III

MR. LOW AT COOPER UNION

Under the ceiling of the Cooper Union basement hall a campaign audience always seems unduly charged with political power. The crowd of black coats and white faces, with here and there in the aisles the glitter of a policeman's buttons, are hidden in places by the white round pillars which rise at intervals all the way from the platform to the back of the room. One carried into the place blindfolded would know intuitively that he was far under ground. On the narrow platform, with the silvered reflectors throwing white light down upon him, was Seth Low. A com-

fortable smile of complacency, far different from the tense unrest of most of those who stand in that socialistic pulpit through the year, lighted his broad features. He spoke slowly, with great consideration for the possibly limited comprehension of some of his hearers. His manner was that of an after-dinner speaker. His appearance started a cheer, which was echoed in diminuendo as he spoke, but most of the appreciation of what he said came as laughter and the shouted approval of individuals. When he stepped back to his chair and the final applause was rendered there came a great voice from under the farthest corner of the ceiling:

"He's all right, but we wanter holler. Give us Jerome!"

IV

MR. JEROME AS A CAMPAIGNER

In a great gloomy room which was once the sales-room of a wholesale dry-goods firm, the Order of Acorns had its daily noon meetings. The motto of the Acorns was ancient: "Tall Oaks from Little Acorns Grow." The Acorns began with a meeting of five newspaper men. It ended the campaign with a daily attendance of 4,000 wildly enthusiastic young men who stood unwearied for an hour and cheered and howled for the Fusion candidates. It was to the Acorns that Mr. Justice Jerome first unfolded himself as a campaigner.

At the end of the room farthest from the street was a platform, all covered with green oak boughs. On it were forty or more charter members of the Acorns. At the desk at the front was young Mr. Johnson, the Great Oak, the founder. A clean cut young Southerner he was, with a red head and a white waistcoat in startling contrast under the glare of the arc lamp over him. With native Georgian eloquence, he thundered scorn and derision at the crew who had "stolen the honahed cloak of Democracy, gentlemen, as we of Southern blood have learned to revere it."

The cheers which came at his every pause were met and overcome by cheers from the street, which rolled up through the crowd and kept rolling from end to end of the room until the waves lost identity in a wild tumult that was at its highest about a group of men pressing along the edge of the room to the front. It was Justice Jerome, with his volunteer body-guard, young men who had served under him for pay while he was exposing the secret channels between crime and the city government and who now served him against his will, almost, from sheer loyalty to the man. Clean cut, athletic young men they were, good-natured, but sternly quick of eye to forestall any danger to their ward which might come out of his assaults on criminals.

When Jerome, keen of eye, judicially stern one moment, derisive in another, appealing as a warm friend of all mankind in the third, stood under the light and told his story with a voice shaking with deep-toned indignation, the clerks and bookkeepers, messengers, porters, and merchants, who stood before him were so quiet that we on the platform could hear their labored breathing. When he sneered at the good men and bad who were jointly responsible for the things of which he told, every scornful sentence was pointed with an angry roar. When he left the building the guards were shoulder to shoulder about him, pushing away with open hands the jostling mob that swept down the sidewalk and overflowed the curb to the car tracks, shouting the name of Jerome as they marched.

The nominating committee which set the name of Jerome on the ticket did so with apprehensive headshakes. "He has earned the honor," they said gravely, "but he will be a heavy load to carry. He is so impulsive." Despite the open efforts of Tammany to trade votes against Jerome for Low votes, to buy his defeat even with money, Justice Jerome had double President Low's plurality when the votes were counted.

V

TWO VIEWS OF THE SAME THING

In a thoroughly unpleasant little cubby hole in the headquarters of the Citizens Union sat a young man whose weariness of spirit was written on his face. It was the third week of the campaign.

"This has all been very int'resting, you know, very int'resting, and an enjoyable experience, really. But, do you know, I'll welcome the end of the campaign. This is getting to be disagreeably like a business, disagreeably so. There are so many letters

to write and people to see and so very very many bills to pay."

In a large arm-chair at a big desk, surrounded by stenographers and typewriters, in Tammany Hall, not three minutes' walk from the weary young man's cubby hole sat another young man with corresponding duties.

"Me tired? No," he said, "no more'n for the last four years. Business is business!" And in spite of such things as these Fusion won.

VI

JUSTICE JEROME'S PERSONALITY

Justice Jerome in a great hall speaking intensely the words that burned out from his heart, putting up his hand to stop applause lest it break the continuity of his thought, was one man. Justice Jerome in a racing automobile leaning forward to decrease the resistance of the wind, his eyes shining with delight behind his eyeglasses, whirling around dark corners on two wheels, looking over his shoulder at the trail of four more automobiles tooting and snorting, which leaped and swung along behind him with their loads of newspaper reporters, was a totally different man in outward manifestations. But those who followed him and who became, as the campaign went on, more of a devoted body-guard than a corps of impartial commentators on his campaign, learned to understand that different aspects of the Justice's personality were simply caused by his different ways of doing things as thoroughly as they could be done. When he made six speeches, covering thirty-five miles of territory, in Brooklyn in three hours, he was as sincere a dare-devil in covering the ground as he was sincere a fighter of civic uncleanliness when he stepped out upon each of the six platforms and pleaded with and stormed at his audiences until men and women wept before him.

VII

IN THE SMALL HALLS

Not all of the great city's campaign speaking was done with the stimulus of tremendous crowds and fluttering flag draperies and the blare of brass music. Much of the hardest work which the campaigners were called upon to do was speaking in small halls on the East Side of Manhattan Borough and in the outlying districts of Brooklyn where the people for the most part are of foreign birth. One who obtained the aid of a policeman and was half thrust, half dragged through a hallway packed with men who fought with their elbows and their knees for standing room, and was at last injected into the hall where the speech-making was going on, found the strenuous side of the city campaign before him in the strongest relief. The room at its best lacked even every-day freshness and cleanliness. The odor of stale beer from the saloon in the front was pervasive. A yellow-gray pall of heavy tobacco smoke hung down almost to the shoulders of the audience. Constant outbursts of quarreling among overcrowded men at the back of the hall broke into the speakers' utterances. But notwithstanding it all, the speaker, perhaps Mr. Edward M. Grout, the Fusion candidate for Comptroller, pale, with a Mephistophelian black beard and a biting sharp voice that gave added sharpness to the keen shafts of his simple arguments, always seemed closer to the sympathy and understanding of the people in such places than in the great auditoriums in the richer parts of town. The Anti-Tammany campaign was a campaign for the down-trodden and the oppressed. In the small halls the way to deliverance was given them in their own abiding places.

VIII

ON THE CITY'S EDGES

Down a lane through which the October wind cut shrewdly beneath the bare tree branches bobbed a double line of twinkling torches. A bass drum and a squeaky fife sent rather diffused marching music over the corn stubble. There was not a house anywhere in sight.

The nights when Mr. Low and Mr. Shepard went over the bay to the Borough of Richmond were made into occasions, it may be said without disrespect to either gentleman, not unlike circus nights in the normal country village. The pavilion at Prohibition Park was carpeted with sawdust. The shout of the peanut vender and the crunch and the crackle which were its echoes resounded loud in every corner. Impartially enthusiastic small boys were everywhere, and bonfires blazed in the open space before the doors.

THE WORK OF THE BOOK WORLD

THE NEED OF A LITERARY CONSCIENCE

By Frank Norris

PILATE saith unto him: what is truth?" and it is of record that he received no answer—and for very obvious reasons. For is it not a fact, that he who asks that question must himself find the answer and that not even one sent from Heaven can be of hope or help to him, if he is not willing to go down into his own heart and into his own life to find it?

To sermonize, to elaborate a disquisition on nice distinctions of metaphysics is not appropriate here. But it is—so one believes—appropriate to consider a certain very large class of present day novelists of the United States who seldom are stirred by that spirit of inquiry that for a moment disturbed the Roman, who do *not* ask what is truth, who do not in fact care to be truthful at all, and who —and this is the serious side of the business— are bringing the name of American literature perilously near to disrepute.

One does not quarrel for one instant with the fact that certain books of the writers in question have attained phenomenally large circulations. This is as it should be. There are very many people in the United States, and compared with such a figure as seventy million, a mere hundred thousand of books sold is no great matter.

But here—so it seems—is the point. He who can address a hundred thousand people is, no matter what his message may be, in an important position. It is a large audience one hundred thousand, larger than any roofed building now standing could contain. Less than one one hundredth part of that number nominated Lincoln. Less than half of it won Waterloo.

And it must be remembered that for every one person who buys a book there are three who will read it and half a dozen who will read what someone else has written about it, so that the sphere of influence widens indefinitely, and the audience that the writer addresses approaches the half-million mark.

Well and good; but if the audience is so vast, if the influence is so far-reaching f the example set is so contagious, it becomes incumbent to ask, it becomes imperative to demand that the half-million shall be told the truth and not a lie.

And this thing called truth—"what is it?" says Pilate, and the average man conceives at once of an abstraction, a vague idea, a term borrowed from the metaphysicians, certainly nothing that has to do with practical, tangible, concrete work-a-day life.

Error! If truth is not an actual work-a-day thing, as concrete as the lamp-post on the corner, as practical as a cable-car, as real and homely and work-a-day and commonplace as a boot-jack, then indeed are we of all men most miserable and our preaching vain.

And truth in fiction is just as real and just as important as truth anywhere else—as in Wall Street, for instance. A man who does not tell the truth there and who puts the *un*-truth upon paper over his signature will be very promptly jailed. In the case of the Wall Street man the sum of money in question may be trivial, a hundred dollars, fifty dollars. But the untruthful novelist who starts in motion something like half a million dollars invokes not fear nor yet reproach. If truth in the matter of the producing of novels is not an elusive, intangible abstraction, what then is it? Let us get at the hard nub of the business, something we can hold in the hand. It is the thing that is one's own, the discovery of a subject suitable for fictitious narration that has never yet been treated, and the conscientious study of that subject and the fair presentation of results. Not a difficult matter it would appear, not an abstraction, not a philosophical kink. Newspaper reporters, who are not metaphysicians, unnamed, unrewarded, despised even and hooted and hounded, are doing this every day. They do it on a meagre salary, and they call the affair a "scoop." Is the standard of the novelist—he who is entrusted with the good name of his nation's literature—lower than that of a reporter?

"Ah, but it is so hard to be original," "ah, but it is so hard to discover anything new." Great Heavens! when a new life comes into

the world for every tick of the watch in your pocket—a new life with all its complications, and with all the thousand and one other complications it sets in motion!

Hard to be original! when of all of those billion lives your own is as distinct, as individual, as "original," as though you were born out of season in the Paleozoic age and yours the first human face the sun ever shone upon.

Go out into the street and stand where the ways cross and hear the machinery of life work clashing in its grooves. Can the utmost resort of your ingenuity evolve a better story than any one of the millions that jog your elbow? Shut yourself in your closet and turn your eyes inward upon yourself—deep *into* yourself, down, down into the heart of you; and the tread of the feet upon the pavement is the systole and diastole of your own being—different only in degree. It is life; and it is that which you must have to make your book, your novel—life, not other people's novels.

Or look from your window. A whole Literature goes marching by, clamoring for a leader and a master hand to guide it. You have but to step from your doorway. And instead of this, instead of entering into the leadership that is yours by right divine, instead of this, you must toilfully, painfully endeavor to crawl into the armor of the chief of some other cause, the harness of the leader of some other progress.

But you will not fit into that panoply. You may never brace that buckler upon your arm, for by your very act you stand revealed as a littler man than he who should be chief—a littler man and a weaker; and the casque will fall so far over your face that it will only blind you, and the sword will trip you, and the lance, too ponderous, will falter in your grip, and all that life which surges and thunders behind you, will in time know you to be the false leader, and as you stumble will trample you in its onrush, and leave you dead and forgotten upon the road.

And just as a misconception of the truth makes of this the simplest and homeliest of things, a vagary, an abstraction and a bugbear, so it is possible that a misconception of the Leader creates the picture of a great and dreadful figure wrapped in majesty, solemn and profound. So that perhaps for very lack of self-confidence, for very diffidence, one shrinks from lifting the sword of him and from enduing one's forehead with the casque that seems so ponderous.

In other causes no doubt the leader must be chosen from the wise and great. In science and finance one looks to him to be a strong man, a swift and a sure man. But the literature that today shouts all in vain for its chief needs no such a one as this. Here the battle is not to the strong nor yet the race to the swift. Here the leader is no vast, stern being, profound, solemn, knowing all things, but, on the contrary, is as humble as the lowliest that follow after him. So that it need not be hard to step into that place of eminence. Not by arrogance, nor by assumption, nor by the achievement of the world's wisdom, shall you be made worthy of the place of high command. But it will come to you, if it comes at all, because you shall have kept yourself young and humble and pure in heart, and so unspoiled and unwearied and unjaded that you shall find a joy in the mere rising of the sun, a wholesome, sane delight in the sound of the wind at night, a pleasure in the sight of the hills at evening, shall see God in a little child and a whole religion in a brooding bird.

THREE NOTABLE "LIVES"

A PARTICULARLY fruitful publishing season has brought out at least three books of notable interest to students of literature.* Mr. Horace E. Scudder's "Life of Lowell," Mr. Graham Balfour's "Life of Robert Louis Stevenson," and Mr. Leslie Stephen's "Letters of J. R. Green" are definitive biographies of three men who have left their impress deep in the life and literature of the nineteenth century.

Mr. Scudder's "Lowell" fills out the incompleteness of the Lowell "Letters," edited by Professor Norton eight years ago. Generous and just, Mr. Scudder writes not only for the older generation grown up in sight of the gilt dome of the State House, which takes a personal pride in the successes and honors of Massachusetts' men, but also for all Ameri-

*"James Russell Lowell," a biography, by Horace E. Scudder, two vols., illus., $4 net—Houghton, Mifflin & Co. "The Life of Robert Louis Stevenson," by Graham Balfour, two vols., illus., $4 net—Charles Scribner's Sons. "Letters of John Richard Green," by Leslie Stephen, one vol., illus., $4 net—The Macmillan Co.

cans who have a patriotic interest in their country. Lowell's life had the richness which comes from diverse interests diligently and successfully pursued, and suggests to the Boston mind a far-away likeness to the great citizens of Florence, whose ripe versatility brought so much honor to themselves and their city. Born in 1819, dying in 1891, Lowell, as poet, citizen, diplomatist, had a worthy share in the great services which Massachusetts rendered to the United States in the transitional period from the time when this country was practically a collection of provinces to the present epoch of a united industrial society.

Mr. Scudder delineates Lowell primarily as a poet, but if we consider Lowell's work as a contribution to English poetry of this century and repeat to ourselves the names Wordsworth, Coleridge, Byron, Keats, Shelley, Tennyson, Browning, Swinburne, we perceive at once that his accomplishment as a poet was but one part of his achievement as a citizen—and Mr. Scudder most open-mindedly shows us the way to such an estimate—for Lowell's poetry is the expression of thoughts that a citizen and a gentleman should think.

With great skill and delicacy the biographer has depicted the shining story of Lowell's youth, his love, his marriage to Miss Maria White, and shows us the gracious influence that prepared Lowell for his duties as a citizen and made love, poetry and public duty appear to him like three Graces hand in hand; and we are left at liberty to prefer the oak wreath of the citizen to the laurel of the poet. Certainly Lowell's services as professor at Harvard College, as editor of the *Atlantic Monthly*, as Minister to Spain and to England, and even as essayist, are subordinate to his career as the man to whom the educated and high-minded men of New England looked to express their beliefs during the trying times of Mexican War, anti-slavery agitation and Civil War, though, of course, those dignities lent weight to his teaching upon civic duties.

Mr. Scudder has had no easy task, for Lowell's character was strange in many ways and hard to understand, but we feel as we read that the biographer's ideal has been to write the life as Lowell would have wished it written, and we are sure that he has written a book which gives pleasure and profit.

All lovers of Stevenson have been waiting for his biography by his cousin, Mr. Graham Balfour. The "Letters," edited by Mr. Sidney Colvin, interesting and delightful beyond those of any Englishman since Keats, were not enough; we have been hungry for more. There is no better proof of that bewitching quality in Stevenson, which drew to him friends and lovers like a human law of gravitation, than our sense of right to greater intimacy and more familiar fellowship, which refuses to rest content with the bits of autobiography scattered through the essays and with the reminiscences of his friends. This biography is excellently done—Mrs. Stevenson and Mr. Lloyd Osbourne lent their aid—but it does not give us very much new information. We want more gossip like the passage in which Mrs. Jenkin, wife of that Fleeming Jenkin whom Stevenson has described with so much skill and affection, relates her first sight of Stevenson: "Suddenly from out a dark corner beyond the fireplace came a voice, peculiar, vibrating, a boy's voice. . . . I listened in perplexity and amazement. Who was this son who talked as Charles Lamb wrote? this young Heine with the Scottish accent?" We wish a better knowledge of Mrs. Sitwell, the lady to whom those delightful letters were written as youth waxed into manhood; we are curious to learn more of that temporary moral maladjustment between him and his father, which is so often the price which two generations pay that the younger may have a larger life. However, mere beggars and would-be trespassers must take what they can get, and in these two volumes we get a great deal. Mr. Balfour recounts the story of this manly and Christian pilgrimage, bringing together in a smooth and easy narrative all scattered records which concern his hero, charming us again with a fresh picture of that gracious figure and deepening our regret at his too early death.

A dozen recorded incidents show Stevenson's innate lovableness. After some peasants in County Kerry had murdered an upright landlord and had boycotted his family, Stevenson wished to go at once, rent the farm and live there. When some native priests were imprisoned at Samoa he ministered to them so kindly that on their release they cleared the road to his house, named the Road of the Loving Heart. In his youth a

thousand pounds, the first goodly sum in his possession, disappeared in gifts and unreturned loans to his friends, and when he met a poor couple of wandering minstrels he wrote "Providence and the Guitar," and sent them the gains. He went through life showing his morning face to the just and the unjust—a loyal Scotsman by birth, and a cosmopolitan gentleman by instinct. One of his prayers, written at Samoa, prays that he be delivered from mean hopes and cheap pleasures, but the prayer had already been granted at his birth.

We little knew before the appearance of the admirably edited "Letters of J. R. Green" that behind the brilliant pages of the "History of the English People" was a man as brave, as loyal, as humorous, as lovable as Tusitala. Wisely Mr. Leslie Stephen has kept in the background, and allowed Green himself to speak. The result is a fascinating biography in letters of a writer who was in some respects a great historian and in many respects, as Tennyson called him, a "jolly vivid man."

The later letters, mainly to Freeman, are naturally the most absorbing. Green dragged through his Oxford course with an increasing hatred of his college, and in his clerical career he was so confined and pestered in a dull routine that for all his brave light-heartedness he was not unwarrantably rebellious. But later, when the "Short History" was being written and rewritten and again rewritten, he corresponded with delightful force and freedom. His letters have not the charm perhaps of Stevenson's or Lowell's, but a charm, nevertheless, that makes the writer delightful and cheering to know as a man. He kept always the love of children that caused him early to accept a curacy, because a little child for fear of losing him had tied his leg fast to a table when he had come to decline the appointment; a notable vein of humor, growing mellower with time; the courage and sympathy, akin to Stevenson's, voiced thus when he knew he was doomed to invalidism: "I am not so scared as some people might be; my only regret is that I have not done more in my life if it is to be a short one." "What seems to grow fairer to me as life goes by is the love and peace and tenderness of it; not its wit and cleverness and grandeur of knowledge, grand as knowledge is, but just the laughter of little children and the friendship of friends and the cozy talk by the fireside and the sight of flowers and the sound of music."

The letters throw light on the literary activities of the seventies; they show Green's method of work; they are not lacking in trenchant criticism; they contain much ripe wisdom and a constant coloring of ready humor; they are written in a graceful, natural style; but their chief excellence is an undercurrent of sunny, courageous optimism. Green, like Stevenson, was an inspired apostle of cheerful doing.

A SHORT GUIDE TO NEW BOOKS

The Portion of Labor

In Miss MARY E. WILKINS's new novel, a daughter of a factory "hand," born with the instincts of fine New England gentility, walks clear eyed the path that such a girl must walk in a New England mill town. Tenderly nurtured by illiterate parents this Ellen Brewster, after a brilliant high school course, gives up a chance to go to college, and works, to support a broken father—in a shoe factory. Her New England conscience compels her to make the sacrifice; her New England conscience makes her institute a strike; her New England conscience leads her back to work at the head of the discouraged "hands"; but through all her trials and temptations her innate fineness is unsmirched. Loving deeply, she subordinates love to her duty as unaided and uninfluenced she sees it. At last she is rewarded. She is an inspiring character. The book is powerful, moving, and full of the stuff of literature—a piece of the most important serious work in contemporary fiction. (Harper. $1.50.)

French Art

The Scribners and Mr. D. B. Updike are to be congratulated on producing what is perhaps the most truly artistic piece of bookmaking in this season's output. Mr. W. C. BROWNELL's subtle analysis of the famous masters of French art is presented with type, paper and binding which are a delight to the eye.

The forty-eight reproductions of paintings and works of sculpture help to illuminate the author's acute and searching criticisms; and while the possibilities of half-tones in such work are distinctly limited it is something to have produced the most adequate half-tones of paintings yet published in an American book. Mr. Updike's reputation as a maker of fine books cannot but be enhanced by this delightful volume and it should serve as a publisher's guide and inspiration for some time to come. (Scribner. $3.75 net.)

The Making of a Country Home

Besides telling how a city drudge with a longing for the country puts a thousand miles between himself and his work every day, Mr. J. P. MOWBRAY adds to his book the charm of an exceedingly easy and original style. John Dennison, we are told, out of his clerk's salary of $2,400 buys a small house and farm and works out his rural ambition—though we suspect that his wife, Lucy, is the real maker of the country home. Eminently practical, it is all fascinating: the author of "A Journey to Nature" could not be less than that. Clever sketches by Charles Edward Hooper help to tell the tale. (Doubleday, Page. $1.50 net.)

Lazarre

Around the legend that the tortured son of Louis XVI and Marie Antoinette was rescued from the Temple prison and smuggled to America, Mrs. MARY HARTWELL CATHERWOOD has woven a charming fabric of romance. The Dauphin, made imbecile through his maltreatment in prison, is turned over to a half-breed Mohawk chief in the Lake George region. As Eleazar—or Lazarre—Williams, the Chief's son, he is being reared when he recovers his reason. The history of his love, his thrilling adventures in France, and his renunciation of the Bourbon crown Mrs. Catherwood tells with climactic vigor. (Bowen-Merrill. $1.50.)

Great Religions of the World

These eleven articles by distinguished scholars vary in value and interest. "Confucianism," discussed by Mr. HERBERT A. GILES, is related to Christian missionaries rather than to the Chinese and is practically denied the title of religion. "Buddhism," by Mr. T. W. RHYS DAVIDS, is better, as is "Mohammedanism" by Mr. OSKAR MANN. SIR A. C. LYALL explains the complicated theological mixture in "Brahminism," and Mr. D. MENANT describes how the "Parsis" have kept their individuality. "Positivism" is sandwiched between the decaying doctrine of the Sikhs and that curious phenomenon "Bābism." "Judaism" is treated briefly. After reading RABBI GASTER'S sketch of it, one has become so cosmopolitanly religious as barely to notice the discrepancy between the Rev. Washington Gladden who counts 520 million Protestants and 242 million Catholics and Cardinal Gibbons who counts nearly 212 million Protestants and 290 million Catholics. (Harper. $2.00.)

Captain Ravenshaw

Mr. ROBERT NEILSON STEPHENS' new romance has the merit of satisfactory construction: the plot works out successfully. A swashbuckling Captain Ravenshaw champions a persecuted goldsmith's daughter in Elizabethan London, and with his ready blade fights her battles until to his great astonishment he wins her love. He is a robust François Villon not wholly lost to respectability. His deeds, together with those of a weak-kneed companion, make a tale to be read with some enjoyment and forgotten without a qualm. The writer should have spared us his preface. (L. C. Page. $1.50.)

The French Revolution and Religious Reform

Dr. WILLIAM M. SLOANE of Columbia University presents a study of religious conditions in France from 1789 to 1804. It is based on the Morse lectures for 1900 before the Union Theological Seminary in New York, and is of especial importance because of the questions which confront the French Government of today. The causes which led up to the enforcement of the Concordat are considered, and the reader is enabled by the presentation of all sides to determine for himself whether France is likely to move onward to complete disestablishment or not. (Scribner. $2.00.)

Princess Puck

Miss UNA L. SILBERRAD'S new novel, without any of the minor tones which characterize her earlier "Lady of Dreams," is carefully planned and consistently worked out, possessing a realness and balance and wholesome optimism most pleasant to the remembrance. "Princess Puck" is an "odd" girl, but despite criticism she grows quietly yet sturdily; clear-headed and big of heart; healthy of mind and body; generous and resourceful; good to think about and good to look upon. Without losing sight of the minor characters, Miss Silberrad has treated this creation of hers fully and sympathetically. (Doubleday, Page. $1.50.)

History of American Verse

Beginning with the abortive attempts of Mr. R. Rice, "one of the earliest arrivals at Jamestown," the late Mr. JAMES LAWRENCE ONDERDONK has followed the halting muse of American verse through the prosaic Puritan period, the more promising literature in the Middle Colonies, and so on to our own voluminous decade. There is evidence throughout the book of painstaking research and conscientious effort at judicial estimates, but it is to be regretted that some of the most characteristic contemporary singers have been omitted. (McClurg. $1.25 net.)

Papa Bouchard

In this bright story, Miss MOLLY ELIOT SEAWELL recounts the adventures of an old French bachelor, escaped from his sister's watchful care and aided by his lively valet. The situations are most amusing, the atmosphere as Parisian as the scent of Lubin's extract or the flavor of a French bon-bon. The 46 illustrations by W. Glackens are of exceptional merit and add greatly to the book. (Scribner. $1.25.)

Wards and Matrons of New France

Beginning with Marguerite de Roberval, Miss MARY SIFTON PEPPER narrates the history of New France through the lives of notable women. The reader is carried through interesting biographies of mothers, wives, teachers, missionaries, and social leaders from the early pioneering to the fall of Quebec—the latter ascribed to the corrupting influence of Madame de Peau. Many illustrations add to the book's attractiveness. (Little, Brown. $1.50 net.)

The Last Days of the French Monarchy

Miss SOPHIA H. MACLEHOSE provides in this admirable chronicle of the events preceding the French Revolution an easy and lucid approach to the profounder works on the subject. References to authorities, together with a bibliography, make the book of especial value. (Macmillan. $2.25.)

Caleb Wright

Mr. JOHN HABBERTON tells an enjoyable story of a Western "boom" town and of the struggles of the self-reliant men and women who try to build it up. Caleb Wright, the principal figure, is sympathetically and intelligently drawn. (Lothrop. $1.50.)

Raffles

Mr. E. W. HORNUNG has gone back to the Amateur Cracksman. The same interesting gentlemanly rascals continue their successful thieving—Raffles the grim, unhesitating, charming criminal and Bunny, the half-unwilling but loyal accomplice. The public will like these entertaining villains as much as ever, for Mr. Hornung's inventiveness is always fresh and his story-telling power is well matured. (Scribner. $1.50.)

Photography as a Fine Art

Since the day when Delaroche, the painter, exclaimed "Painting is dead!" at sight of one of Daguerre's pictures, photography has suffered at the hands of its friends. The excited amateur, finding himself able to manipulate negatives and prints, has claimed for photography possibilities that existed only in his imagination. In the last five or ten years, however, a small but increasing band of workers have been proving that photography is a fine art—by photographs to which no artistic sense can refuse recognition. The achievements of these men and women Mr. CHARLES H. CAFFIN has here chronicled with unusual acumen and sanity. Suggestive as are the comments, it is the pictures themselves which are convincing. In largeness, in simplicity, in real feeling, in grasp of the essential *personality* of the subject, the photographs can easily hold their own with painting. (Doubleday, Page. $3.00 net.)

A Japanese Nightingale

ONOTO WATANNA infuses the witching charm of Japan into a delicate little romance. Misty decorations by Genjiro Yeto increase the Oriental illusion. It is an alluring holiday book. (Harper. $2.00 net.)

A Japanese Miscellany

Here is another entertaining sheaf of Japanese lore, the fruit of LAFCADIO HEARN's indefatigable gleaning. Folk tales, sketches, a chapter on Japanese dragon-flies and one on children's songs, all serve to make us better acquainted with our Western next-door neighbors. (Little, Brown. $1.60 net.)

The Making of a Marchioness

Mrs. FRANCES HODGSON BURNETT tells briefly how a well-born young lady, forced by her poverty to act as a "companion," finally marries a Marquis. Though it is a well-rounded little narrative, clothes are so frequently important that the story will appeal chiefly to feminine readers. (Stokes. $1.10 net.)

Calumet K.

Mr. SAMUEL MERWIN and Mr. HENRY K. WEBSTER relate with fascinating briskness how Charlie Bannon, incarnation of intelligent strenuousness, built a grain elevator at Chicago in face of financial schemers and a plotting labor agitator. With its swift action, its virile philosophy, its Kipling-like concreteness, its well managed, though not particularly delicate, love interest, the story is thoroughly alive. (Macmillan. $1.50.)

The Man from Glengarry

This is one of RALPH CONNOR's (Mr. Gordon's) wholesome, straightforward, ordinary stories. As the scene is laid in the Ottawa peninsula and British Columbia, the local color is rather novel. The hero, Ronald Macdonald, is a serious young Scotchman who fights well, and recovers from a broken heart with unusual celerity. The story is pure, honest, and well-told, above the average of story-telling, but hardly a masterpiece. (Revell. $1.50.)

Deafness and Cheerfulness

So tender, philosophic, and well-written is this little book by the Rev. A. W. JACKSON, that it will be helpful to all the author's fellow-sufferers. He has discovered consolation in several phases, and presents it convincingly. Everyone, whether deaf or not, can learn something from the result of his study. (Little, Brown. $1.25.)

The Making of Jane

This is a study of temperaments by Miss SARAH BARNWELL ELLIOTT. Ardent little Jane Ormond, a Southerner, is moulded and distorted by a wealthy New York cousin who strives to make her a "social success." At length Jane rebels against the artificiality and sordidness of her life and goes into the working world to live after a better fashion. By no means insignificant, the book contains some creditable character analysis and plenty of well arranged situations. (Scribner. $1.50.)

The Imp and the Angel

We follow the fortunes of the "Imp," a boy of seven, with unflagging interest, because Miss JOSEPHINE DODGE DASKAM has given us the picture of a real boy. His pranks and his friends are vividly before us, and his lingering babyhood and his embryo manhood are charmingly suggested. (Scribner. $1.10.)

Tales of the Cloister

Miss ELIZABETH G. JORDAN with insight and quick human feeling pictures admirably the simple life of convent girls and nuns. Containing little humor—which is not unknown within convent walls—the stories, mainly sentimental, are good and well told. (Harper. $1.15 net.)

The Wage of Character

The ultimate purpose of JULIEN GORDON'S story of fashionable New York life is a highly ethical one, but to reach it the reader is condemned to a rehearsal of much that is unappetizing. A Western-born heiress and an impecunious social climber make an uncongenial marriage with the usual result. Julien Gordon (Mrs. Van Rensselaer Cruger) is always epigrammatic, keen and forcible, but here she achieves more: she is suggestive and high-principled. (Appleton. $1.25.)

THE MONTH'S MOST POPULAR BOOKS

REPORTS from booksellers in Boston, St. Paul, Cincinnati, Philadelphia, Washington, Detroit, Buffalo, Cleveland, Rochester, Los Angeles, New York, Louisville, Kansas City, Toronto and St. Louis, and from librarians in Detroit, Springfield, Jersey City, Minneapolis, Brooklyn, Hartford, Bridgeport, Buffalo, Cincinnati, San Francisco, Los Angeles, Dallas and Chicago combine into the following lists showing demands for books for the month ending November 1st:

BOOK-DEALERS' REPORTS

1. The Right of Way—Parker. (Harper.)
2. D'ri and I—Bacheller. (Lothrop.)
3. The Eternal City—Caine. (Appleton.)
4. The Crisis—Churchill. (Macmillan.)
5. Kim—Kipling. (Doubleday, Page.)
6. Blennerhasset—Pidgin. (Clark.)
7. Cardigan—Chambers. (Harper.)
8. Circumstance—Mitchell. (Century.)
9. Lazarre—Catherwood. (Bowen-Merrill.)
10. Graustark—McCutcheon. (Stone.)
11. Tristram of Blent—Hope. (McClure, Phillips.)
12. The Cavalier—Cable. (Scribner.)
13. Captain Ravenshaw—Stephens. (L. C. Page.)
14. New Canterbury Tales—Hewlett. (Macmillan.)
15. The Making of a Marchioness—Burnett. (Stokes.)
16. The Red Chancellor—Magnay. (Brentano.)
17. The Puppet Crown—McGrath. (Bowen-Merrill.)
18. The Tory Lover—Jewett. (Houghton, Mifflin.)
19. The Ruling Passion—Van Dyke. (Scribner.)
20. Warwick of the Knobs—Lloyd. (Dodd, Mead.)
21. Tarry Thou Till I Come—Croly. (Funk & Wagnalls.)
22. The Helmet of Navarre—Runkle. (Century.)
23. Life Everlasting—Fiske. (Houghton, Mifflin.)
24. The Secret Orchard—Castle. (Stokes.)
25. Foma Gordyeeff—Gorky. (Scribner.)
26. The History of Sir Richard Calmady — Malet. (Dodd, Mead.)
27. A Friend with the Countersign — Benson. (Macmillan.)
28. Raffles—Hornung. (Scribner.)
29. In Search of Mademoiselle—Gibbs. (Coates.)
30. The Octopus—Norris. (Doubleday, Page.)

LIBRARIANS' REPORTS

1. The Crisis—Churchill. (Macmillan.)
2. D'ri and I—Bacheller. (Lothrop.)
3. The Eternal City—Caine. (Appleton.)
4. The Right of Way—Parker. (Harper.)
5. Truth Dexter—McCall. (Little, Brown)
6. The Puppet Crown—McGrath. (Bowen-Merrill.)
7. The Helmet of Navarre—Runkle. (Century.)
8. A Sailor's Log—Evans. (Appleton.)
9. The Tribulations of a Princess—Anon. (Harper.)
10. Blennerhasset—Pidgin. (Clark.)
11. The Life of Phillips Brooks—Allen. (Dutton.)
12. Tarry Thou Till I Come—Croly. (Funk & Wagnalls.)
13. Graustark—McCutcheon. (Stone.)
14. Up from Slavery—Washington. (Doubleday, Page.)
15. Alice of Old Vincennes—Thompson. (Bowen-Merrill.)
16. Cardigan—Chambers. (Harper.)
17. The Visits of Elizabeth—Glyn. (Lane.)
18. The Gentleman from Indiana—Tarkington. (Doubleday, Page.)
19. When Knighthood Was in Flower—Major. (Bowen-Merrill.)
20. Kim—Kipling. (Doubleday, Page.)
21. The Cavalier—Cable. (Scribner.)
22. China and the Allies—Landor. (Scribner.)
23. Eben Holden—Bacheller. (Lothrop.)
24. The Individual—Shaler. (Appleton.)
25. Penelope's Irish Experiences—Wiggin. (Houghton, Mifflin.)
26. Foma Gordyeeff—Gorky. (Scribner.)
27. Eleanor—Ward. (Harper.)
28. Like Another Helen—Horton. (Bowen-Merrill.)
29. The Octopus—Norris. (Doubleday, Page.)
30. The Riddle of the Universe—Haeckel. (Harper.)

THE peaceful ending of the great Northern Pacific war in the combining under one harmonious control of the Northern Pacific, the Great Northern, and the Burlington systems, with the promise of other lines being acquired, is only an added proof of the growth of community of interest. Banks, too, are combining and enlarging their capital so as to meet the requirements of great loans. New York is a more powerful money centre daily. Meanwhile the railroads are expanding as well as combining and are winning higher commendation from foreign visitors, while Mr. Carnegie says the entire lines must be rebuilt. Compressed air is taking the place of steam and of electricity, and automobiles are coming to be a factor in the transit problem. Larger ships are being built and deep channels are being cut to accommodate them. Everywhere is the cheerful noise of activity, the voice of progress, while beneath, the industries of the country are knitting themselves together, joining ranks for the struggle in the world's markets.

THE CONCENTRATION OF BANKING INTERESTS

THERE has been in the last few months an unusual though perfectly explicable development in the business of banking in New York. It is, in reality, only another and necessary step of the movement toward reorganization toward which the great industrial combinations formed the first wedge. Not very long ago the National City Bank and the National Bank of Commerce each increased its capital to $10,000,000. The law says that no bank can lend more to any one borrower than the total amount of its capital stock. For this reason a bank which has small capital and immense deposits finds it difficult to do business with one of the huge "trusts" that represents, perhaps, twenty formerly individual concerns. The "trust" will need in one loan what the twenty manufacturers of a few years ago would have asked in twenty loans. The only way in which a bank with small capital can supply the single large demand is by splitting the loan into a number of smaller amounts. Such procedure means much additional labor. A bank with enlarged capital can meet the demand.

Following the initiative of the two banks named, the Bank of the Republic was merged in the First National Bank, and the latter was capitalized also at $10,000,000. At the same time the owners of the City Bank purchased control of half-a-dozen smaller banks throughout the city. In November, for example, the National City and the Hanover National Banks bought control of the National Citizens' Bank which, in turn, absorbed the Ninth National Bank. In this way the two Wall Street institutions obtained a strong representation in the dry-goods section of the city. Another chain of smaller banks has also been secured by a group of capitalists who have not, up to this time, been prominent in banking. The important results of such banking combinations become evident at some time when a financier like Mr. Morgan wishes to borrow a large amount of money for some great undertaking. What one bank cannot do the associated banks can accomplish without difficulty or delay. A large sum can be obtained for immediate use, and no undertaking, even among the most vast combinations of capital, need suffer because money is not forthcoming.

REMARKABLE DEVELOPMENTS IN INTERNATIONAL FINANCE

INTERNATIONAL bankers were busy during the fall months with the most interesting foreign exchange situation in a decade—a situation dotted with many unusual incidents and criss-crossed with many currents. New York has been exporting gold without inconvenience at a time of year when, commonly, gold is usually coming in. England in October, with all the expense of the Boer War burdening her and with her customary $60,000,000 income from the Transvaal mines cut off, with deranged securities markets at home and on the Continent, succeeded in diverting a demand for gold from Paris to New York. It was then discovered that New York had been an extensive borrower of funds in Europe in the early part of the year, owing to stock market demands, incident notably to the celebrated Northern Pacific corner. For this reason London was able to transfer the demand from that market to New York. Mean-

while gold has been steadily flowing in from the Klondike and Australia to the Pacific Coast, and thence to the money centre in New York. The cotton export movement, which supplies an immense volume of foreign exchange bills, was late in starting, and European holders of American securities sold largely, thereby creating available funds at New York. The market, therefore, least able to supply the gold released it. The New York market has held a dominating position in its ownership of "liquid gold" for export or local use. London, with its network of banks in every civilized country, and England's position as the great ocean carrier, make Lombard Street the natural clearing house for international bank credits. But the little canyon-like street in New York which old Trinity Church faces is taking a place in international finance second only to it.

THE PRICE OF CONSOLS IN WAR TIME

A STUDY of the prices of British consols during the past few months in connection with England's foreign and colonial operations and her trade, is interesting historically as well as from the view of Americans who are holding them as an investment. British consols have sold as low as 91 this year—the low price in twenty-two years. In 1888 Great Britain's debt was converted from a 3 per cent. to a 2¾ per cent. issue and in 1903 it will become a 2½ per cent. security. Tracing rapidly the quotations it will be seen that in 1880 the consols sold as low as 97⅜ and as high as 100¾. In 1896 and 1897 they had advanced to 113⅞. In 1898 the low price was 106¾, but with the opening of the Boer War the depression came rapidly. In October, 1899, after the two sudden advances in the Bank of England's discount rate just before the war was declared, they went to 102½; November 25th, after the Belmont victory, they sold at 103; December 16th, after the disastrous week in which three British reverses occurred—100¾; February 16, 1900, after the relief of Kimberley —101¼; February 27th, after Cronje's surrender—101⅝; May 19th, after the relief of Mafeking—$101\frac{2}{16}$; May 31st, after the mines had been saved and Pretoria taken—$102\frac{5}{16}$. In the last few months, with new loans to be floated and the market consequently depressed, the following prices were made: August, 93¼; September, 94⅝; October, 93⅜; November, 92, and November 7th, 91¼. There are £560,000,000 British consols—otherwise described as British consolidated stock or Government debt outstanding—redemption of which cannot be effected until April, 1923, when Parliament may make provision to pay them off at par with interest. Considerable round amounts of consols are held in this country—which, indeed, is looking constantly for sound European government and municipal securities—and more would be owned by Americans were it not for the fact that foreign owners of the consols are subject to the British income tax.

Over against the low price of British consols it is a source of national satisfaction to place the high premiums which United States Government bonds command at this time, when purchases of its own bonds are made by the Uniied States Treasury at prices which yield an interest return of less than 2 per cent. But in making such a comparison it must be remembered that there is no provision in Great Britain for holding British Government bonds by banks in substitution for cash reserve, as in this country.

AN ENGLISH VIEW OF AMERICAN RAILROADS

RECENTLY a number of the officers of the Northeastern Railway of England made a tour of the United States to study American railroads. It is absurd to say that they were astonished by what they saw, for they were well-informed railroad men, and knew in some measure what they would find before they came here, but the general manager did say before he left, that in such features of economical railroading as hauling vast loads with colossal locomotives England would never equal the United States until the English had abandoned their national conservatism; and that such tremendous rebuilding and renovating schemes as those carried out or now under way on the New York Central, the Erie, the Lackawanna and the Pennsylvania Railroads would be impossible on any English road. As the railroad problem is one of cheap transportation, as cheap transportation depends in this age on big boilers, big heating surfaces, compound cylinders and generally heavy engines for traction and capacious cars to hold the freight, and as these latter when made up into trains of great length call for the heavy rails, heavy bridges and wide and high tunnels that these roads and others are putting in, it is easily seen that if the English had the enterprise to equip their railroads for the needs of the future, or even to apply the methods of the present—to stop, for instance, the practice of spending more money to patch up an old locomotive than a new and up-to-date one would cost—they have not the combinations of capital required for the carrying out of sweeping, far-sighted reforms. Heavy as the outlay for improvements is here, it would be many times greater there; for, whereas our railroads pass through thousands of miles of cheap and unobstructed land, the English railroads form a fine-meshed network with tunnels and bridges without number in a thickly settled territory about as large as the State of

New York. It is not difficult to remodel a prairie railroad, but a road through city lots cannot be improved and enlarged without an expense that is fairly prohibitive.

Mr. Norman D. Macdonald, the well-known railroad expert who accompanied the railroad officials as secretary, spoke of the remodeling operations he had seen as marvelous manifestations of the power of combined capital, and pointed out the reasons quoted above why English roads must remain less efficient than ours. He spoke of many other features of American railroading as admirable, of many features of English railroading as backward, and as he has for some time been endeavoring to arouse railroad men in England to the necessity of adopting efficient devices and efficient methods wherever they could find them, it is interesting to note his comments on the trend of railroading in England now that his former progressive ideas have been crystallized by his observations here. He says that the vestibule car is gradually pushing out—though very slowly—the compartment car; that the continuous air-brake is being put on freight trains; that there is a growing realization of the economy of large train loads; that engines are growing larger; that the automatic block-signalling system is replacing the hand-lever block-signalling system; that the pressed-steel car is rapidly coming into use. Every one of these indications means that English railroads are being Americanized. It is true that Mr. Macdonald is enthusiastic over a Siberian express which provides "a gymnasium, a five-language library, a barber shop, a silvered bath (four shillings a plunge, but the barber gives medical attendance *free*), electric bed heaters, a music-room with a piano, dining and drawing rooms, all designed and carried out in various styles with exquisite skill, and all this at much less than our third-class fares," but awaiting the day when such Utopian conveniences shall become common, he feels that, in so far as it is possible, English railroads should improve at once in the direction in which American roads have improved.

But most interesting of his many pointed comments on railroad matters here and abroad is his prophecy of the coming development of railroading in the British colonies. There, he points out, American methods are already in vogue. And as the opening of South Africa, that must come if the English ever succeed in wiping out the plucky Boers, will mean a tremendous railroad development north of the Cape, there will be a vast field in that region for the disposal of commodities which we are better fitted to produce than any other country. Said Mr. Macdonald to the writer: "I should not be surprised to see 2,000 locomotives, with other equipment to match, imported into South Africa in the next few years." It is to be hoped that we may furnish what is needed.

WILL AMERICAN RAILROADS HAVE TO BE REBUILT?

FOREIGN engineers and railroad men hold a high opinion regarding American roads. Throughout the country millions of dollars are now being devoted to general improvement of railroad facilities. Thousands upon thousands of pressed steel cars of heavier tonnage are being built. American locomotives are winning great favor abroad and are being made stronger and heavier to draw immense traffic. Road-beds are planned now with the same engineering skill that is building great bridges. So many rails of such great weight are concerned in the improvements that the steel rail mills of the United States Steel Corporation have booked orders enough already to keep them busy until 1903. Yet Mr. Andrew Carnegie is reported to have said in a recent interview:

"The American railroad of no remote future will be on a bee-line. Some of the great improvements now being made must, within a few years, go for nothing. The entire work will, in not a long time, have to be done over again. Even the great Pennsylvania Railroad is only a second-class road after all, although I regard it as the greatest of the great systems. It has a great deal of improvement ahead of it to hold its place."

Such a remark is likely to become as historic as its author's apothegm that steel is either prince or pauper. If his prophecy is true it is only an additional witness to many others that American production and industry and finance are still practically in their infancy.

A FREIGHT CAR FAMINE

NOTWITHSTANDING the failure of the corn crop and other minor influences, the railroads seem to prosper. Indeed, so great is the load of things grown and made that all the roads are drawing, across continents and to the centres from which more of it each year is being shipped over seas to Europe and Africa and the Orient, that there is a veritable famine in freight cars. This strange lack of shipping facilities is most felt in the West, the Northwest and the Southwest. Farmers on the great ranches, who are anxious to sell their products at a good figure in the best markets, have found that the railroads could not move their crops, and in every direction farmers, millers and shippers generally have been delayed at the one time of the year when every day means money to them. But the famine is in the East as well. The great Penn-

sylvania system, with its 150,000 freight cars, has placed orders for 30,000 more, and the manufacturing plants are working day and night to overtake the demand. The Pressed Steel Car Company, it will be remembered, announced some time ago that it had built as many cars this year up to the 1st of August as in the entire year of 1900, when it was turning out one hundred a day. Meanwhile the roads are maintaining a firm freight rate, and most of them are showing increased earnings in spite of unfortunate conditions. It was reasonable to suppose, for example, that the great Atchison system covering the corn-growing country would have, in consequence of the shortage in the crop, reflected a serious decrease in traffic and earnings. But the unexpected is true instead, for the road shows substantial increases in earnings as compared with the corresponding high-pressure period of last year. Interesting as showing the general condition of many roads is the fact that forty-nine railways for the fourth week in October exhibited an increase of 14.31 per cent. in gross earnings. Forty of them reported individual increases. For the quarter ending September 30th eighty-eight roads gained nine per cent. in gross earnings and 17.50 per cent. in net earnings. The time seems to have come therefore when, in busy periods, the business of the country has become too large for the rolling-stock capacity of its railroads.

DEVELOPING BETTER WORKMEN

WITH the growth of automatic machinery the man who is a mere machine doing a daily routine of duties has been crowded either up or down. He has either gotten new heart, new thought and originality into his work, giving better service and is living a fuller life, or he is accomplishing less and gaining a mere existence with added effort. Employers everywhere are seeing that the first result is of much greater value to them as well as to the employee. The putting of added zest into the labor of the workman is a good investment. Shorter hours are giving added health and opportunities for self-education. Encouragement to thrift is helping the employee to own his own home. The American workingman was never as ambitious as he is today—for himself and for his children.

An incident in this general movement of employers furnishing opportunities for self help among employees is the railroad reading-room which the Santa Fe Railroad is developing. All along the line, in Kansas, in Oklahoma, in Colorado and in California, sometimes in extensions of the station buildings, sometimes in separate structures, the railroad is opening rooms in which are to be had by the employees the latest periodicals and books of all sorts. The plan includes, also, bath-rooms and rooms devoted to games of all sorts, billiard rooms and bowling alleys. These privileges are practically free to the railroad men. If towels are furnished in the baths a fee to pay for laundry charges is paid. The use of a billiard table costs ten cents an hour, and the money is kept as a fund to buy new tables or to repair old ones. The ordinary library rules are applied to the books. The magazines, running the entire gamut from the popular monthlies to the technical periodicals which furnish the men with a more thorough knowledge of their craft, are retained only as long as they keep a timely interest, and are then sent out among the trackmen to reach homes that, otherwise, would not see a magazine from one year's end to another. Of the books now in use about forty per cent. are fiction, fifteen per cent. historical, fifteen per cent. biographical, ten per cent. technical, ten per cent. general literature and the rest reference. If any employee has become interested in any subject he can get the books he needs by applying to the superintendent of the reading room, and if he wishes to own the books he can get them at a considerable discount. These superintendents are usually old employees of the company who have become incapacitated for outside work, and are therefore of and not above the men.

Nor are books and magazines the only aids to growth which this system furnishes. Each superintendent is on the lookout constantly for successful men of every profession and business, who will talk to the employees about the things they have done and know thoroughly, either in the rooms, or if the crowd is too great, in the town opera house. Doctors tell the men what they should eat and drink, or a chemist tells them something of the simpler things of chemistry. The superintendent often talks briefly of interesting developments in many sciences. A man who saw the social reunion and dance that followed one of these talks remarked, "It is a little heaven for the boys." On certain days the families of the men are allowed the privilege of the rooms.

Such a system is rather expensive, running up at present to about $15,000 a year, but the road considers it a good investment. There is a better *esprit de corps* among the men. They like their work better and they therefore do it better. They get a broader view of things, and become more ambitious. Men who used to drag through the last hour of their day's labor work overtime because they wish to see their task done. And, perhaps most important of all, there is unconsciously a better understanding between employers and employed. The railroad is keeping close watch on the work of these reading rooms by a system of monthly reports. It knows exactly

how many hours the billiard tables have been used and how much of a call there has been for the books, and measures, with allowance for the heavy traffic of some days which keeps the men hard at work, the results. Practically no one is absolutely a non-attendant, and about half the men are very regular. The average daily attendance runs from 100 to 160. About fifteen per cent. of the books are in demand all the time, and the high quality of the books most called for is exceedingly encouraging. Few books are lost, and no refusals have been made because of the character of the book desired. The men are making themselves better workmen and, with the road, are prospering by the improvement.

WORKINGMEN AT COLLEGE

THE college graduate in the workshop is no novelty, but a successful experiment tried last summer in the University of Wisconsin brought the workman to the college lecture-room, and that is a novelty that deserves imitation. Deeply impressed with the part that the German mono-technical schools are playing in the rapid industrial advancement of Germany, Professor J. B. Johnson, Dean of the Engineering School of the University of Wisconsin, and a member of the advisory committee on the Carnegie Institute, with the coöperation of Acting-President Birge, instituted last summer a school of artisans and apprentices at Madison. At present a summer course, the school will become in time, if enough students seek it, a distinct department of the University, continuing throughout the year. Desire for improvement, some familiarity with the three R's, and a fee of fifteen dollars plus laboratory expenses are the only requirements.

The result of the initial experiment—it has been decided to make the school a permanent institution—was that twenty-eight persons, ranging in age from fifteen to fifty-five and coming from as far west as North Dakota and as far east as New York, received a letter from the University attesting successful completion of one term's work. These occupations were represented: professor, teacher, draftsman, inspector of railway motive power, foreman, machinist, lineman, stationary engineer, and machine-shop apprentice. Much of the work was done in the excellently equipped shops and laboratories of the University; it was found better to have the students working out problems under personal supervision than to have them lectured to in classes. The lectures, accordingly, were made as few as possible and untechnical. So great an interest was aroused in the work that next year an advanced course will be given to accommodate those who expressed a desire to come back and continue.

Such an experiment as this marks a tremendous advance in American education. Already Lord George Hamilton, British Secretary of State for India, has ascribed our industrial eminence to our technical education, but it is a striking fact, of which he was doubtless unaware, that the theoretical education of a vast number of skilled American workmen is obtained not at our great scientific schools, or at the Armour, or Pratt, or Drexel Institute, but through correspondence schools whose lessons are learned in laborious evenings and whose fees are paid from hard-earned wages, or through careful study of technical journals. The Carnegie Institute, which will be the best technical school in the world and which will furnish evening instruction to ambitious working boys and opportunities for research to university graduates alike, will do for many what the German schools now do, where young men spend years in studying the minute details of such trades as dyeing and weaving. It will do many other things as well. But the State of Wisconsin, which like the other western states provides education free as air from the kindergarten to the professional degree, takes the lead in assuming as a public duty the trade education of its artisans. It gives the scientific schoolboy a chance to devote six weeks of his vacation to technical study that will allow him later to acquire a liberal education together with his engineering studies; it gives the students of correspondence schools and the readers of trade papers a chance to make their theories concrete; it gives any workman, so desiring, a chance to better himself. When the "Summer School for Artisans" becomes an all-the-year-round school for artisans, when it offers evening instruction, so that students may not be obliged to secure a leave of absence from regular occupations, when the fee is abolished—for the abolition of all the nominal university fees is constantly agitated in Wisconsin as in other western states—a system of education will exist in Wisconsin, and in other states where the admirable innovation is copied, that will make our rapid national progress still more rapid.

THE POWER OF THE FUTURE

COMPRESSED air has not been heralded as capable of all things under the sun as liquid air has been, but here and there a contractor has introduced it, a contract has called for it, a car line has tried it, special conditions have made its use imperative as in mines and caissons, until it is now so widely employed as to be the typical engineering power. Without it many of our greatest engineering feats could not be accomplished on time, and some could not be accomplished at all.

More and more are Western mines resorting to

waterfalls for power, and often the best method of using this power is in the form of compressed air. Often the difficulty of securing fuel makes the use of steam impossible, and even when it is made, it will soon turn to water in pipes of great length. Electricity is dangerous; it is productive of fire; it needs the service of electricians. But compressed air can be easily made, readily stored for indefinite periods, led through pipes without loss. It will drill better than any other power; it will hammer better; it will hoist and haul and furnish tractive power; it solves the puzzling ventilation problem without cost, for its exhaust keeps a tunnel fresh and sweet; it can be used, by simply uncoupling the nozzle from the drill, to blow a tunnel free of smoke. Moreover, it is safe. Its use is so simple that in one place in California where all the timber had been burned, air compressed by waterfall turbines was brought and used in the idle engine; a new equipment was unnecessary.

The power is used for coal and granite cutting and for an increasing number of hand-tools, mainly for hammering or boring. In narrow quarters, as in the hold of a ship or under a locomotive, where a man could not swing a hand-hammer, not to speak of a sledge, the little air-hammer at the end of a hose does its work with adequacy and speed. In these small tools as well as in larger engines air has been used to a notable extent in the building of the Chicago Drainage Canal, the Niagara Tunnel, the Subway and the bridges in New York, the Jerome Park Reservoir, the new reservoir for Boston, the new East Boston tunnel—where it is used, among many other things, to push forward the great tunnel shield—and in every great engineering task of recent years. In the week of November 4, it was reported that the Government tests of a pneumatic gun resulted in successful shots at a three-mile range with instantaneously exploding shells weighing 300 pounds. Compressed air is the most versatile, so to speak, of the various forms of power.

So far its traction possibilities are in the experimental stage. Compressed air locomotives for mining purposes have proved successful, but so recent have been the improvements in devices to handle the air easily, smoothly, noiselessly, safely, that only one street railway, the city street railway of Rome, New York, is at present equipped with it. Yet street transportation will one day be obliged to adopt either the storage battery system or the compressed air. Trolleys are dangerous and unsightly; conduits are expensive, and likely to be affected by weather conditions; any system dependent on a circuit is subject to a complete stoppage if an accident happens to the current. Each car should be independent of the others. It remains to be seen whether the storage battery car or the compressed air car will solve the problem of efficiency, safety, and cheapness. If the compressed air car finally demonstrates its usefulness, the total horse-power of compressed air in all kinds of work may yet surpass that of either electricity or steam.

DIGGING UNDER WATER

THROUGH the very centre of lower New York bay, to take the place of the old circuitous route, a direct channel is being dredged to a depth of forty feet. The big ships like the *Deutschland*, the *Kaiser Wilhelm* and the new *Kronprinz*, which are forced now to await the flow of the tide, will have regular sailing hours, and the need of a pilot with the skill of a Hervé Riel will have passed. The digging of a ditch under water is scarcely less interesting than the cutting of a deep trench like the new Subway in New York through the city streets. In this particular channel borings have been made which show that the finding of rock is decidedly improbable. The spectacular element which is in the Subway construction—the broadsides of blasts, the waiting street cars, the drilling through solid rock and all the noisy confusion of many men working at many tasks—is absent in the cutting of this channel under water. In fact the work is being done so quietly that New York with its diverse activities scarcely knows of it. Two great twin-screw hulks of steel, built much like long rectangular boxes, with vertical stack, foremast and mainmast, steam daily into the channel's course and the big suction tubes are lowered and are sunk about ten feet into the sand and mud of the bottom. The pump is charged and the bottom of the bay begins to run into the dozen hoppers which extend for one hundred and twenty five feet through the centre of the dredge. Meanwhile the boat moves forward at a rate of about twenty-five feet a minute, so that new material can be fed constantly into the hoppers by the suction. The men who are digging this trench from the ship's decks have only to see that the machinery is kept running. The boat itself does the actual work, just as the big scoop fills itself from a hillside in the Subway. Like the scoop, too, it discharges its own load. When the hoppers are entirely filled, the tube is drawn up, the pump is stopped, and the boats start for the dumping-ground eight miles out at sea. When they are nearly there, compound pumps are started which supply water to free the discharge valves of the packed sand. When the dumping-ground has been reached the valves are opened about three feet by hydraulic power and a pressure of about sixty pounds to the square inch aids gravity in clearing the hoppers. Meanwhile the suction

pipe is lowered into the water, the pump is started, and the system of pipes and hoppers is washed clean and made ready for another burden.

Altogether it is estimated nearly 40,000,000 cubic yards of the bottom of the bay—more than six times the estimated total excavation for the Jerome Park Reservoir—will be carried out into the ocean by these boats, which move by machinery, dig up 8,000 tons of mud and sand an hour by machinery, and discharge their loads by machinery. This is being done quietly and yet so rapidly that it is expected that the whole making of the channel will not take more than two years. The *Thomas* and the *Miles*, then, are making a way for the big liners and the growing trade and traffic the ocean boats carry.

MANY NEW SHIPS

WHILE the deep channel is being dug through the harbor, larger and faster ships are being built to test its capacity. The new *Kronprinz Wilhelm*, though slightly smaller than the *Kaiser Wilhelm*, is probably faster than either the larger boat or the *Deutschland*. All three are veritable cities afloat, while the *Celtic*, built for carrying capacity rather than for speed, is the metropolis of them all. Down East, meanwhile, the great five-masted schooner and its six-masted successor have been outdone by a new seven-masted steel schooner. This immense craft with three full decks will have seven 135-foot masts, carrying a total of more than 40,000 square feet of canvas.

THE AUTOMOBILE IN RAPID TRANSIT

ONE of the most interesting developments of the automobile is to be found in the experiments in various parts of the country to test its practicability as a factor in the solution of the rapid transit problem. Results, of course, are as yet inconclusive, but enough has been accomplished to demonstrate that automobiles may serve as an addition, if nothing more, to the general lines of public conveyances. Across lower New York at Wall Street, along Jefferson Avenue, a leading residence thoroughfare of Buffalo, and on the streets of Philadelphia, automobile stage lines are being tried. Yet these instances, of course, deal with the question on crowded city ways where a vehicle of almost any description would be assured of a fair amount of patronage.

The real issue to be considered is the availability of the automobile for this work in smaller towns, either entirely devoid of street car advantages, or with a trolley service which on account of its lack of ramifications is of benefit to only a small percentage of the population, and also in interurban and rural traffic. This would seem to be the automobile's especial field, and reports from Evansville, Ind., Passaic, N. J., San Jose, Cal., where automobile lines have been inaugurated, seem to be favorable.

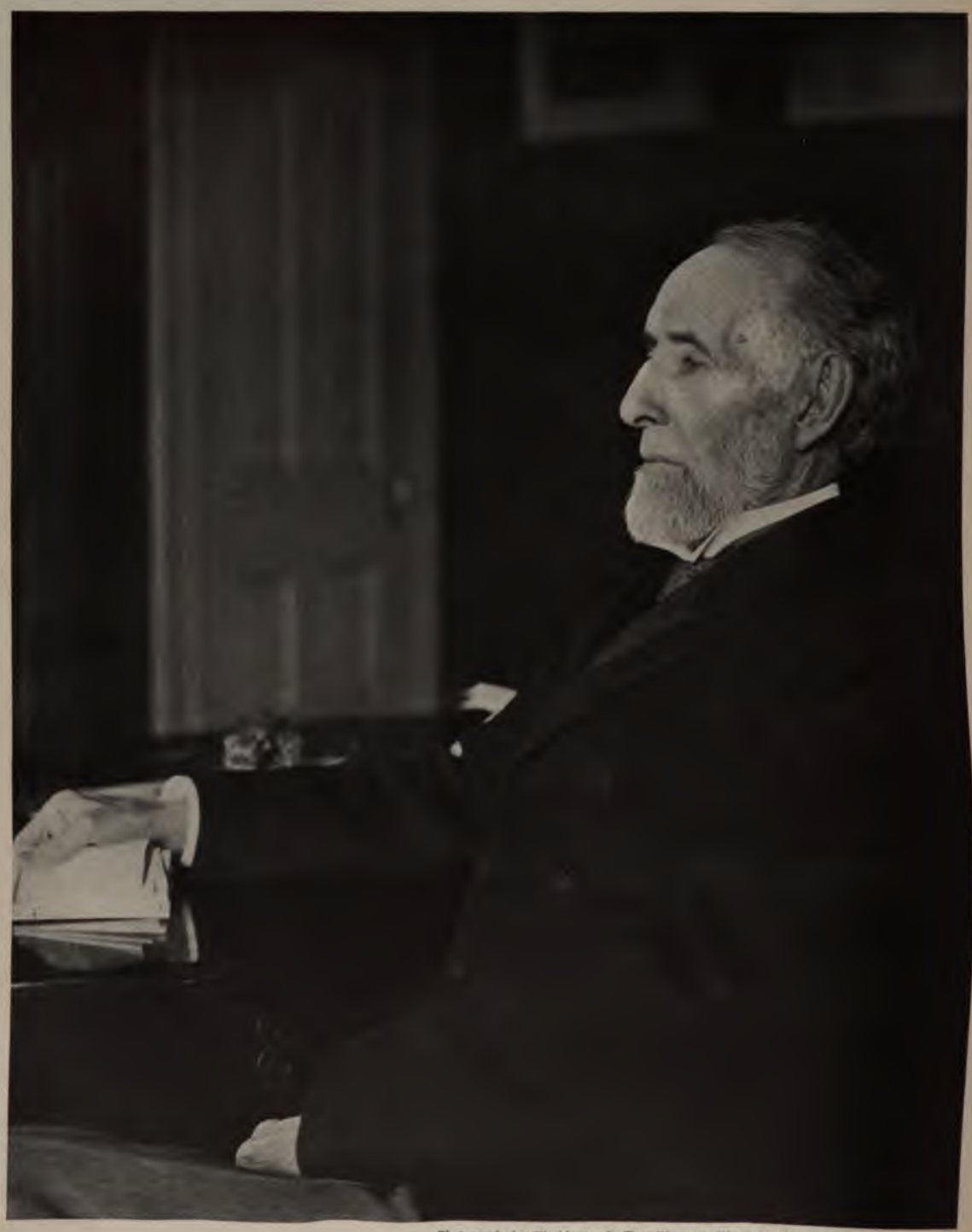
There is a town in the Middle West which has a population of about 20,000, and is situated in the very heart of a rich agricultural district. Within a radius of ten, fifteen, and twenty miles are a number of villages unconnected with the larger community by any railroad or trolley system. An electric trolley with branches to each of these outlying villages has been frequently suggested; but, so far, the enormous expense of constructing the required system and the uncertainty of sufficient return has acted as a most potent deterrent. A project is now on foot, however, to link these several places together by regular automobile stage lines, and the experiment will be followed with exceeding interest, for this case is by no means an exceptional one, but is typical of many localities throughout the country.

Whether the automobile can hold its own when brought into direct competition with the trolley lines is of course problematical. The small amount of capital required and the ease and cheapness of operation make the establishment of such lines seem possible. There is of course none of the expense of surveying and building a special roadbed, the laying of tracks and erection of poles and wires, the installation of costly machinery in a properly arranged building. The automobile is not an exacting vehicle. All it demands is a reasonably good highway, a place to be housed and ordinary care.

Generally speaking, ten automobiles, seating twelve persons including the chauffeur, should answer all requirements for a place of 40,000 population. The first cost is confined to the purchase price of the several machines, at between one and two thousand dollars each, and the entire operating expense per day of twelve hours' constant service, including interest on the money invested, will be only a few dollars. This is exceedingly small in comparison with the figures for the establishment of a trolley system in a city of similar size. The first cost runs up quickly to $100,000, while fixed charges and operating expenses for a two-car service will aggregate many thousands more each year.

It is not certain, moreover, that the comfort and convenience of the automobile stages would not far exceed the necessarily imperfect arrangements of the ordinary street car.

It seems entirely probable that automobiles, as they reach somewhat more perfect development, will be of use in interurban and rural communication as well as on the crowded city streets. They may prove a very important addition to the network of steam and electric railroads which covers the country more closely each year.



Photographed at Washington for THE WORLD'S WORK by Frances Benjamin Johnston

SENATOR SHELBY M. CULLOM

The new Chairman of the Committee on Foreign Affairs

THE WORLD'S WORK

JANUARY, 1902

UME III NUMBER 3

"THE ERA OF EXCLUSIVENESS IS PAST."

—From President McKinley's Speech at Buffalo.

The March of Events

this number of THE WORLD'S WORK are presented some statements and studies of our recently broadened work sion. Mr. Emory, Mr. Rockhill, Mr. Mr. Hunt, Mr. Roberts, Mr. Davis dozen other writers of accurate in- on and practical experience make ey of our activities—political, ad- tive, diplomatic and commercial— the earth; and the stories they e a swift impression of a new era in elopment. But it is only a swift im- that can be given in any one number agazine, and an incomplete view at The interesting material that has been d for the setting forth of the large of American expansion would fill half magazines; and if it were all printed ey would then be only superficially

ven this rapid and incomplete review ough to bring the most solemn sense of nsibility to every thoughtful American; the American people do deeply feel the nsibility that comes with every triumph en with every triumph of trade. The boastfulness that we have been accused of is only superficial—it is, in fact, a kind of American humor, which has always taken fondly to exaggeration and mock self-assertion. The serious national mood is the mood of earnest work and of grave responsibility. To him who reads the American character right, the most important change that has come with our awakening to our own high destiny among the Great Powers and among the strongest forces of the world is the deepened seriousness of the national mood. In public life, on the commercial exchanges, in the press, in every way in which the Greater Americanism expresses itself, it expresses itself with an increasing appreciation of the high obligations to civilization that it imposes upon us.

THE SECRET OF AMERICAN EXPANSION

THE constantly recurring note in the utterances of public men in Europe and in the European public journals is a note of surprise at the rapid expansion of American activity and influence. The reason for this expansion is so simple and fundamental that

the most surprising thing about it is the surprise of Europe. It has from the beginning of the Republic been inevitable. For the increasing trade and the increasing activity of Americans in other lands are the concrete proofs of the success of a democratic order of society—this and nothing more. The theory of a democracy as distinguished from a society which has fixed classes and hereditary privileges is that the equality of opportunity will develop a more efficient type of man. If this result did not follow, then by so much would democratic institutions fall short of what we have claimed for them for more than a century.

It is true we have a territory of boundless resources and an advantageous geographical position; but it is not these that are giving us the lead, for these are but the materials of success. Success itself is an individual quality. If men of the same race and of the same capacity live generation after generation, some under the social and political conditions of the Old World and some under the conditions of the New World, the freedom of initiative and the freedom of opportunity in a democracy will make the men who live under it more efficient than the men who live under an aristocracy. And this is the simple explanation of the whole matter. The surprise that has been very generally expressed in Europe at the rapidity of the "American invasion" shows how superficially the Europeans have read our history and how imperfectly they understand the revolutionary effect that a democratic society has on the training of men. That the English race in a democracy should outstrip the English race in an aristocratic society was to us a foregone conclusion a hundred years ago. If it had been possible for England to rid itself of what Burke meant by his fine phrase, "rank and title and all the solemn plausibilities of the world," it would never have been possible for the Americans in any way to outstrip the English.

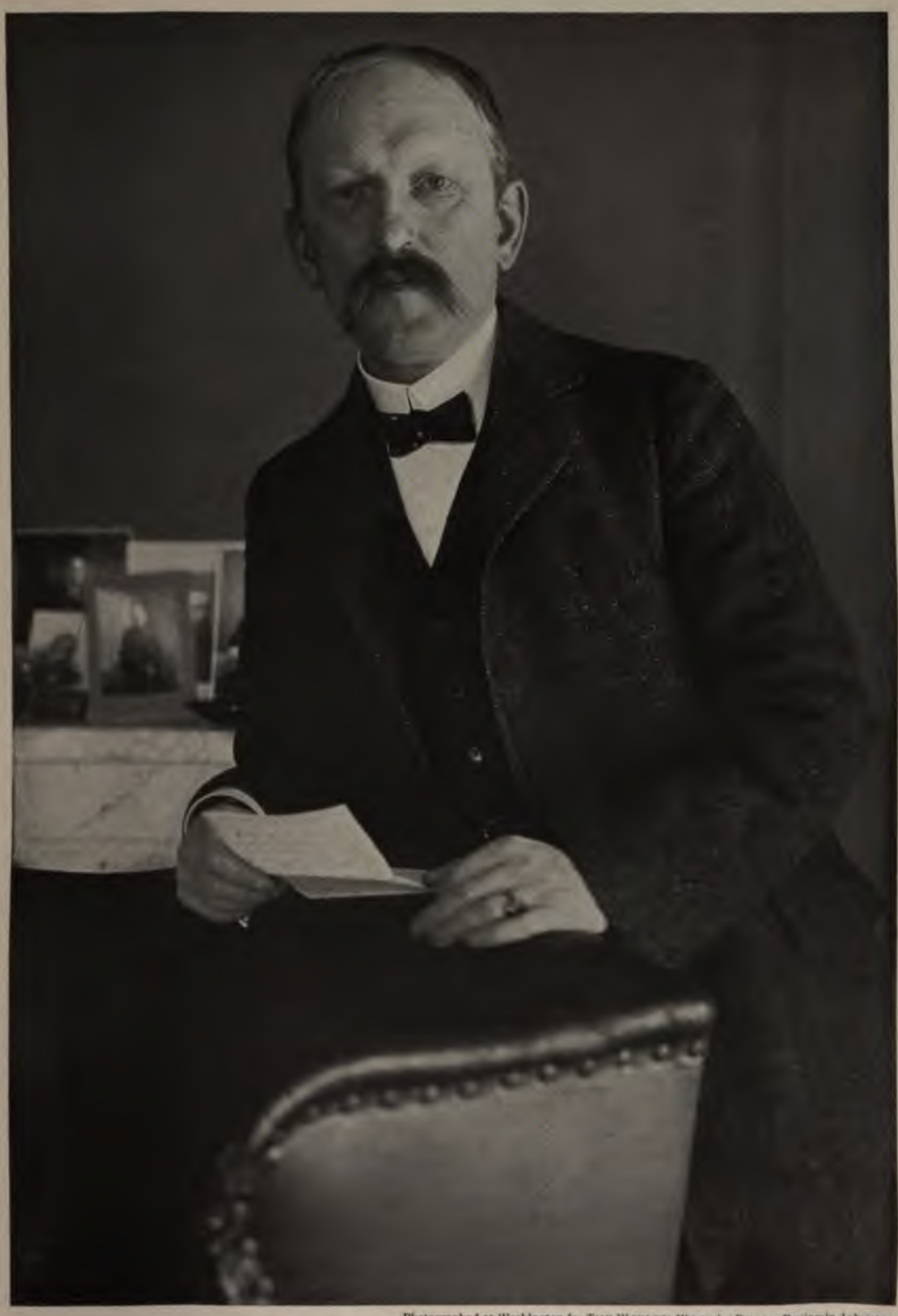
Infinitely more important than any advantage won by us over the countries of the Old World in war or in trade or in the management of affairs is this reason why we win, because these concrete demonstrations of the value of a democracy are but its first-fruits. It is only under conditions of freedom of individual initiative and freedom of opportunity that further development of human society is possible. The thoughtful American regards the "commercial invasion of Europe" of less value as a victory of commerce than as a victory of democracy. It brings the time nearer when "rank and title and all the solemn plausibilities of the world" shall disappear under the pressure of democratic influences.

In the light of the new regard in which the United States is held in Europe, it is instructive to read again De Tocqueville's "Democracy in America" and Bryce's "American Commonwealth." There is a great difference between the old speculative French philosopher's view of our experiment in democracy and the living Englishman's explanation of the practical working of our governmental and social machinery more than a half-century later. But the revolutionary quality of a democracy was more clearly understood by the Frenchman in the early part of the century than by the Englishman in the latter part.

Nor is this strange. The Americans themselves who remembered the Revolution and yet felt a dread of the Old World aristocratic structure of thought kept a keener distinction between the two systems of life than the Americans of the latter half of the nineteenth century kept. For during this latter period the common advantages of freedom of individual movement and improvement had long been taken for granted. In fact we ourselves are now constantly forgetting it. But it is the simple fact that a poor boy born in Connecticut may become an organizer of great industries in Minnesota, or an inventive lad born in North Carolina may revolutionize the warfare of the world—that any man anywhere in our democracy, if he have the mettle of the soil, is likely to win one of the capital prizes of his generation; and still more the fact that the man of only commonplace qualities who may win only a small measure of success for himself may still keep open for his children the road to distinction—these are the simple and fundamental facts that determine the future domination of the world.

LEST WE FORGET

IT is our obligation to our institutions that humbles all thoughtful citizens of the Republic in a time when the mere beginning of a triumph in trade fills the world with talk and wonder. For if we forget the foundation of even this small triumph we put in jeopardy far greater triumphs that await the democratic



Photographed at Washington for THE WORLD'S WORK by Frances Benjamin Johnston

W. WOODVILLE ROCKHILL

Director of the Bureau of American Republics

conception of society. If the trifling riches that we are winning bring the evils of fixed classes and the denial of social mobility, our little wealth will profit us nothing. A few thousands of millionaires and a few hundred-millionaires are merely incidental results of the opportunities of democratic life. The right training of the hundred millions of pairs of hands and the hundred million brains that will soon make up our population has in it a wealth that we have not yet dreamed of. The inevitable achievements of men in our democracy, if the democracy be kept true to the right training of men, will put all lands that hold fast to privilege-built and class-divided social orders relatively where India and China now are. Instead of a spirit of national boastfulness the thoughtful American has a spirit of humble gratitude that the genius of our institutions is expressing itself in such ways as to make its benefits even more manifest than its somewhat bungling political expressions have hitherto made them.

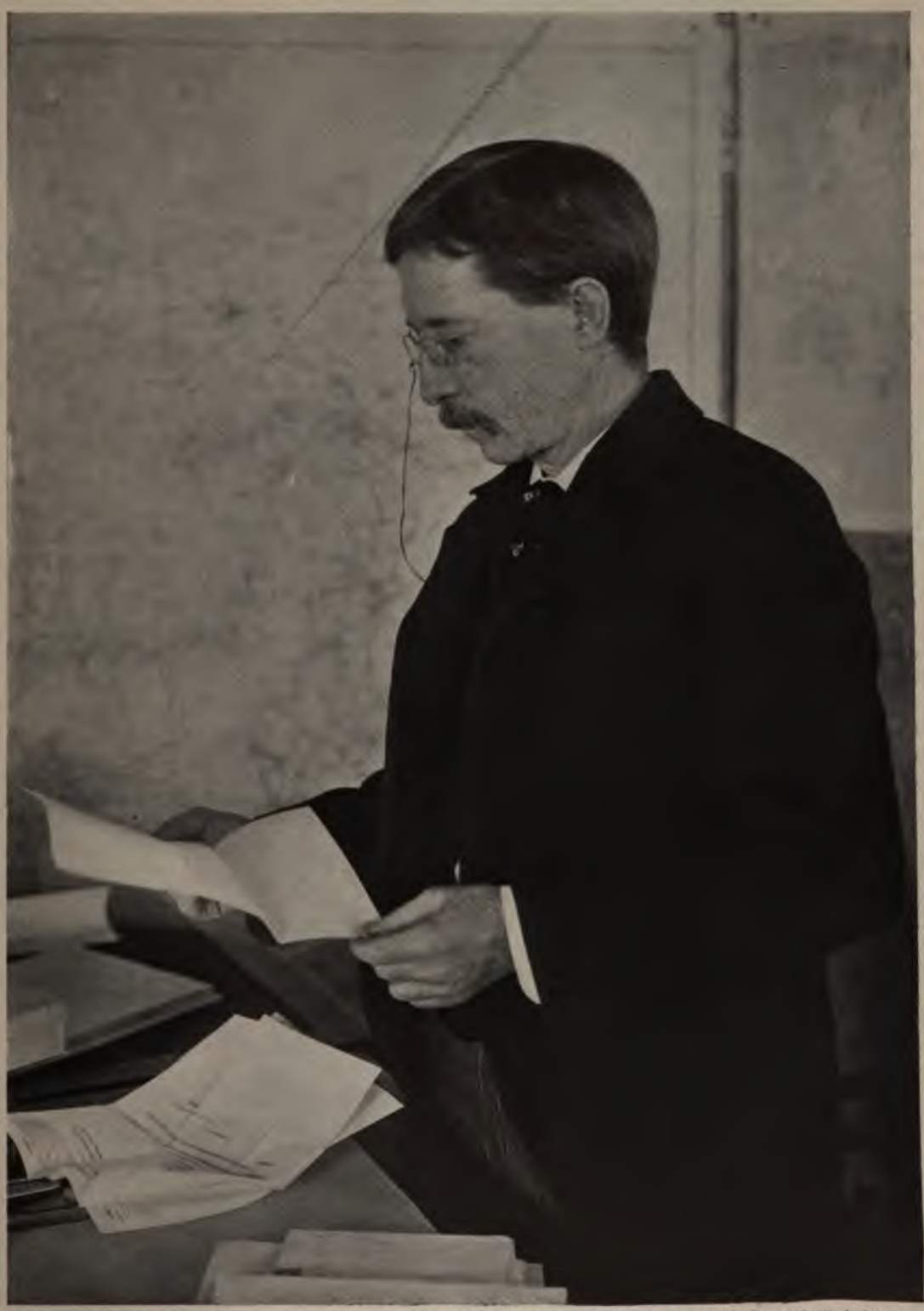
The secret of the whole new chapter in our history is this—for generations we have given the common man a chance to do his best and he has learned to think while he works. This is a result to be grateful for but not to betray us into boastfulness. Other men, especially other men of our race, would develop the same capacity under the same social conditions. And the material vindication of a democracy is after all its smallest triumph.

INCIDENTS OF WIDER POLITICAL VISION

FOR twenty years the people of the United States have been teaching their Presidents the size of their country; for the last four they have been teaching their Congress the size of the world. Such knowledge used to be despised as an educational extravagance for statesmen in a Republic which boasted of its unique isolation. When Andrew Johnson made a tour which would now seem inconsiderable, we pursued him with sneers at his "swing around the circle." When Grant traveled, we inveighed against him as a chronic absentee. When Hayes made a trip through the South, he was charged with designs upon the "rebel vote." It was really not till Arthur's time that a President's desire for a better acquaintance with the country received any general encouragement. But thereafter the more sensible view prevailed, until the demand for President McKinley's presence here, there and everywhere, aroused universal expressions of approval. Home-keeping Presidents, the people concluded, like home-keeping youth, have ever homely wits, and certainly the enlargement of the executive horizon has borne fruit in enlarged intelligence in administration.

A corresponding change has even more recently come over the public conception of a Congressman's range of interest. A lawmaker who peeped across the wall that separated his bailiwick from his neighbor's was once regarded as a trespasser. The period of agitation which preceded our war with Spain, however, was marked by nothing more distinctly than by a newly awakened disposition on the part of Congress to see where it was going—not through the medium of formal reports, but through its members' own eyes. It was in this spirit that the expeditions headed by Senator Proctor and Representative Cummings went to Cuba. At the close of the war Senators Platt, Foraker and Lodge were among the legislative leaders who visited Cuba or Porto Rico, or both, for the purpose of observing actual conditions before being called upon to frame laws to meet them. During the following summer Senator Beveridge made what then seemed a notable trip to the Philippines, to gather material for a speech. Last year, half the spare space on one of the Government transports bound for the same destination was filled with members of Congress, including not only supporters of the administration but leaders of the opposition like Representatives De Armond of Missouri and Gaines of Tennessee, whose observations will take shape in the debates this session.

Four years ago, there was no organized popular sentiment in favor of an isthmian canal. In a perfunctory way nearly everyone assented to a general proposition that it would be a good thing to have a channel cut through the narrow strip of land between North and South America; but the chief argument heard in its favor was the narrow plea that it would cheapen transportation between New York, Boston, Philadelphia and Baltimore on one coast, and San Francisco, Portland, Seattle and Tacoma on the other, by furnishing an active competitor for the transcontinental railroads; moreover, New Orleans and Mobile had aspirations as entrance ports for a new commerce



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FREDERIC EMORY

Chief of the Bureau of Foreign Commerce, State Department

with Chili and Peru. But who then thought of the canal in its broader character, as a great highway for the commerce of the world, the contribution of the United States to universal progress, of which universal trade is only the efficient handmaid?

Four years ago, the idea of a telegraph cable across the Pacific was a day-dream of science but a nightmare of capital. The ocean depths at certain points seemed almost prohibitory, the international complications uncertain, the need—and hence the profit—problematical. Today the cable is an assured fact, with American money and American enterprise behind it, whether the Government assumes the labor and expense of laying it or merely lends its encouragement to the undertaking in private hands. As far as Hawaii, annexation made a two-thousand-mile cable a foregone conclusion before the war with Spain had fairly set in; but our adoption of the Philippines has emphasized the demand for more, in view of the ever-present possibility of events in Europe which would make the use of a route of communication through that continent inadvisable.

Four years ago, every movement to build up an army and navy beyond the merest skeleton was frowned upon by peace-lovers everywhere. Today we have a land force potentially four times as large as the maximum authorized for a generation after the civil war, whilst our armament on the sea has advanced proportionally. The country has learned from its experience in the war with Spain that an ounce of prevention is worth a pound of cure, that credit for possessing the means of self-defense will often spare the necessity of calling them into play, and that magnanimity is the best ornament of power. It is a notable fact that in the same ratio as our real martial strength has become apparent, our troop of agitators has dropped out of view; while simultaneously with increase of our capacity for fighting when we have to, we took an important part in the millennial programme at The Hague.

Four years ago, what meaning had the word "reciprocity" in American ears? Practically its only association was with the hat Mr. Blaine had smashed by his gesture of disapproval while denouncing a protective tariff bill for its narrowness. But Mr. Blaine, broad as his vision seemed to be by comparison with the recognized standards of statecraft in his day, was concerned chiefly for the number of barrels of flour and pounds of pork we should send to South America if we offered the countries there a real inducement to trade with us. The idea of applying the same policy to all the nations of the earth did not enter into his conclusions. How the marvel grows then, when we find President McKinley, the arch-champion of Protection and the Home Market, uttering almost with his dying lips a prayer for a commerce based on the ideal of the universal brotherhood of man!

The most remarkable fact in the extension of the American outlook is that it is so well balanced. It stretches eastward through the new relations formed between the United States and the leading Powers of Europe. It stretches westward through the new grasp our nation has taken upon Asia. It stretches northward through the revival of that fraternal feeling which always underlies a common language and a common law. It stretches southward through the reminder most forcibly conveyed in the Treaty of Paris, that the Monroe Doctrine is still a living principle in American diplomacy.

ENTERPRISES OF EXPANSION

THE two greatest practical enterprises that our expansion of activity has led to and which now lie immediately before us are the cutting of an isthmian canal and the laying of a Pacific cable, and both are now certain to be done. The new treaty with England was laid before the Senate as soon as Congress convened. It gives us all we asked for and need desire. The Isthmian Canal Commission made its report, expressing a preference for the Nicaragua route, and a strong effort will be made during this session of Congress to authorize its construction. The Pacific cable seems equally well assured. To these enterprises there is no organized opposition that follows party lines.

The other two measures that are meant to further our outward growth are the reciprocity trade treaties (whether singly or by a general system) and subsidies to American ships. About reciprocity the Republicans will not easily agree; and to subsidies there will again be a party opposition by the Democrats as well as some Republican opposition. Any subsidy bill is a sharp-edged political tool.

Every careful reader of current political literature observed that in his Buffalo speech Mr. McKinley stopped just short of definitely and openly approving subsidies; and in his Message Mr. Roosevelt halted at the same place. Encouragement to our merchant marine? Yes. By subsidies? Perhaps. It is not beyond probability that the next National campaign may turn on the Dingley tariff and ship subsidies.

But no such fate is likely to await the canal and the cable. These may require money enough to give need of all the revenue that the Dingley law will bring and that might be spent in subsidies. The National treasury is full to running over; but these are large undertakings. There may be a demand also, according to the President's recommendation, for the undertaking by the Federal Government of great irrigation works in our arid territory. The construction of such works will, if prosperous conditions continue, at some early time fall to the general Government; for the long agitation for such a result is winning an increasing number of friends in the Eastern States.

AN UNUSUAL PRESIDENTIAL MESSAGE

PRESIDENT ROOSEVELT'S Message is not a composite, Cabinet-made document. It is the voice of Theodore Roosevelt, with all the earnest gestures of his style. On four large subjects in particular he wrote with a full knowledge and with a strong conviction—the Navy, the Army, the Civil Service, and Forestry. Here spoke the man of the outdoor world who knows every part of our country, the former civil-service commissioner, the energetic assistant-secretary of the navy, and the colonel of volunteer cavalry. Efficiency in the army and no politics and no personal or social influence for promotions—efficiency, efficiency, efficiency all the time; efficiency, too, in the navy, constant target practice, fleet manœuvres, practice all the time; no favoritism in army or navy or the civil service of our dependent islands; the extension of the merit system to the rural postal service and to the consular service; the preservation of trees and streams and wild animal life. There is a refreshing definiteness about these vigorous essays that form a part of this unusual Message. It does not belong to the family of "Pub. Doc." And not the least interesting thing about it is that so small a part of it deals with what we have been used to call "political" (that is to say, partisan) subjects.

OFFICE-HOLDING AS A BADGE OF HONOR

IT is much to say, but not too much, that after three months of Mr. Roosevelt's administration the national civil service is in better tone than it has ever before been in the memory of men now living. He is showing week by week by his appointments that he has a degree of earnestness and courage as a civil-service reformer that forbids him to compromise. He has put back into the classified service about 1,500 places in the several bureaus of the War Department that were exempted from examinations during the Spanish War. He has made the first move towards having the mail carriers in the rural delivery service appointed by the merit system. He has begun to put the Indian agency service under the rules. He has removed the collector of internal revenue in the Louisville, Kentucky, district for violating the civil service law. He has repeatedly declared that in the insular civil service and in the army and in the navy the principle of the merit system shall be rigidly observed. In the same spirit, he has removed the Governor of Oklahoma for letting a public contract in a way whereby he received personal advantage. He has appointed postmasters at Fort Worth in Texas, at Clarksdale in Missouri, and at Decatur and at Union Springs in Alabama, contrary to the wishes of the local Republican machines in those States because he sought first the excellence of the public service. In Delaware he has flown squarely in the face of the Addicks Republican machine by appointing Mr. Robert G. Houston collector at the Port of Wilmington, as he disregarded the local Republican recommendations when he appointed Ex-Governor Johnston of Alabama a judge of the United States Circuit Court. In his Message he recommended the extension of the merit system to cover the consuls, after the principle explained in this number by Mr. Hunt.

To make it a badge of honor to hold a Federal office and an evidence of efficiency—this surely ought to be the aim of every man who has power to appoint; but the common practice has so far fallen short of this ideal that the President's way of taking his obliga-

tions in this serious fashion seems very grim to the practised spoilsman. It is correspondingly invigorating to the whole service.

MR. HAY'S ELOQUENT SPEECH ON AMERICAN DIPLOMACY

THERE is a double propriety in saying in this "Looking-Outward" number of THE WORLD'S WORK how happy a speech it was that Secretary Hay delivered before the New York Chamber of Commerce at its last annual dinner—a speech in which he made clear the character of American diplomacy, and pointed out some of the recent triumphs of our principle of frank dealing and some of the tasks of world-wide importance that await us. "In my experience of diplomatic life," he said, "and in the far greater record of American diplomacy which I have read and studied, I can say without hesitation that we have generally told squarely what we wanted, announced early in negotiation what we were willing to give, and allowed the other side to accept or reject our terms. During the time in which I have been prominently concerned in our foreign relations I can also say that we have been met by the representatives of other Powers in the same spirit of frankness and sincerity. You, as men of large affairs, will bear me out in saying there is nothing like straightforwardness to beget its like." All this he summed up in the very happy epigram: "The briefest expression of our rule of conduct is perhaps the Monroe Doctrine and the Golden Rule. With this simple chart we can hardly go far wrong."

The recent problems of our diplomacy which we have successfully solved are the assurance of the American Republics to the south of us of our sincere interest in their prosperity and that "we no more want their territory than we covet the mountains of the moon"; the satisfactory assurance of the European Governments that our "normal activities are in the direction of trade," that we are preëminently a peace-loving people and that our diplomacy has for its chief aim now the honorable extension of our markets; and that we secured an agreement with the Great Powers for "a fair field and no favor" in the markets of the Orient, and showed the world that we have no territorial ambitions.

This simple statement of recent diplomatic work sounds glib and general But in its scope it covers the greater part of the earth, and it means very substantial achievements. There is nothing in it of the high-handed imperialism with which Mr. McKinley and Mr. Hay were two years ago accused in every foreign capital from Boston to Buenos Ayres. It is a record that the Republic feels proud of, and for which Mr. Hay has already won the distinction of being the most successful of modern Secretaries.

And he does not stop with these achievements. He sees a widening vista of peaceful opportunity for the country such as never hitherto opened before it. Our interests in the Pacific "are destined to indefinite development." A Pacific cable and an isthmian canal must follow quickly, under American control, thanks to his persistent and patient negotiations. The Secretary closed his eloquent speech with this paragraph:

> "The attitude of our diplomacy may be indicated in a text of Scripture which Franklin—the first and greatest of our diplomats—tells us passed through his mind when he was presented at the Court of Versailles. It was a text his father used to quote to him in the old candle shop in Boston when he was a boy: 'Seest thou a man diligent in his business? he shall stand before kings.' Let us be diligent in our business and we shall stand—stand, you see, not crawl, nor swagger—stand as a friend and equal, asking nothing, putting up with nothing but what is right and just among our peers in the great democracy of nations."

THE RETURN OF ORATORY WITH THE RETURN OF ACTION

IT is not strange that so excellent a speech as Secretary Hay's at the dinner of the New York Chamber of Commerce should have been noticed and quoted in every important capital in the world; for it was in a semi-official sense a declaration of the American foreign policy. But it is noteworthy that during the few months of this winter there have been other speeches on other such occasions which also have been quoted all over our country and in other lands—Senator Lodge's in Boston, for instance, when he spoke upon Reciprocity. For many years during the inane and narrow period of our public life—which, praise God, is passed—speeches at the most important American dinners were mere chaff, as stale as the old jokes they were made of. A noteworthy change is taking

place. We are coming to our own again in oratory as well as in action—perhaps in oratory because of action. The result of our expansion of thought as it finds expression even in after-dinner speeches is remarkable. The buffoon-era is ended. Men on public occasions are asserting their dignity, and it is no longer a reproach to say something worth thinking about.

IF A RECIPROCITY CHECK, A TARIFF BATTLE

THE course of reciprocity does not run smooth. The reciprocity convention of manufacturers that met at Washington gave their hearty endorsement to the plan of creating a Department of Commerce, with Cabinet rank. They favor an elastic and comprehensive scheme of reciprocity whereby we may make advantageous tariff arrangements with any nation, at any time, touching any products of theirs or ours. This is the scientific way to go about it and the way that seems likely to prevail. An indefinite number of special trade treaties, with an indefinite number of countries, which must be constantly changed as commercial conditions vary, is a clumsy and troublesome method.

But the manufacturers, while they laid out this admirable general plan, declared also in favor of reciprocity in separate treaties—provided that it did not do hurt to any particular protected industry. The difficulty is, when you come to definite recommendations, to decide who shall sacrifice his own advantages for the public good. This difficulty seems now likely to defeat the pending treaties in the Senate; and we shall have to wait for large results till comprehensive action may be taken. A comprehensive system is better —beyond a doubt. But the defeat or the delay of separate treaties till a comprehensive system can be devised and put in operation may discourage many exporters who are not also protected manufacturers.

The new feature of the next general movement for a change in the tariff, which will not come immediately but which is nevertheless inevitable, will be this—the contest will not be waged between free-traders and protectionists but between exporters and the protected. This session of Congress is likely to be spent in postponing general action on the tariff and in preparing a Department of Commerce.

THE WORLD-GIRDLING TRAFFIC COMBINATION

THE truce of the competing transcontinental railroads that was made by the organization of one great corporation to hold their securities marks a new step in railway consolidation. The four hundred million dollar Northern Securities Company, and the men who compose it, have practical control of the Great Northern road, of the Northern Pacific, of the Union Pacific, and of the Southern Pacific, together with the Chicago, Burlington & Quincy. These aggregate more than 32,000 miles of track.

Nor are these all the roads that are controlled by the same group of men and by others in close community of interest with them. They have steamship lines also across both great oceans and railway lines to the Atlantic seaboard. Half-a-dozen men, therefore, now dominate transportation much more than half-way round the globe. They can haul things from Europe to our Atlantic seaboard, from our Atlantic seaboard to the Pacific, and from the Pacific seaboard to the Orient, all the way in boats and over roads of their own. This is the big earth-girdling dream that is now for the first time come true.

And, if it be true, as it is to a degree, that he who hauls a thing owns it, these men for the time become the owners of much of the fullness of the earth and of the most useful of the products of man's handiwork. Yet the process of consolidation has come about step by step, so naturally and so gradually, that this last great move has hardly produced a shock. Like many other steps in the unification of great interests it has been taken partly because of the very laws that were passed to prevent it. There is, therefore, some stronger law at work than any on the statute-books which makes such great organizations easy and inevitable.

The vision that used to be held up to us of these great masters of transportation as the owners of our substance and as the rulers over millions of men does not now frighten us. For, powerful as they are, they do not really have such ownership or such influence. They, too, are products of economic forces. If they do not serve the public even better than it has before been served, their combinations will sooner or later fall to pieces or will pass from their control. We have somewhat

regained confidence in the power of public opinion over them and over all great aggregations of wealth. But we have regained confidence because we see that there are larger forces at work than any individuals or groups of individuals.

These men themselves give less thought perhaps to the large economic significance of their work than any other thoughtful men in the community. It is not their aim to make an assault on the public welfare. Their motives are the same as the motives of men who consolidate two rival shops in a village and make a "department store," or two stage lines in the country and call it the "union route." They wish to maintain rates of traffic; and they wish to do "a bigger thing" than has before been done. Like other strong men, they love power. But, first of all, they are men of action. They play a fascinating game, and the larger the stakes the better the game. They enjoy the exercise that it gives their imagination as much as they enjoy the sense of power. Gain they do not care for; for money, and railroad and steamship lines are mere counters in the game.

And in prosperous times a large part of the public catches their contagion of enjoyment. People read with excitement of the triumph of this great leader or of that one over his opponents, and of the consummation of this or that plan which puts under unified control a larger number of millions of property than had before been consolidated. We are not yet passed, if we shall ever pass, out of that stage of development in which men like the sport and the adventure of great undertakings. This state of mind may lead to grave dangers and sometimes to disaster, but it has at least the merit of keeping for a little longer a flavor of romance about great commercial deeds.

NATIONAL COMPULSORY PUBLICITY ABOUT INTERSTATE CORPORATIONS

ALTHOUGH this great railroad "merger" has caused no more excitement than is shown by the unsuccessful effort of the Governor of Minnesota to undo it, there is an increasing feeling that stricter Government regulation of interstate railroads and of great corporations in general must be made possible. In spite of the fact that in times of great prosperity the public does not strenuously concern itself with the problem, the best opinion steadily moves forward toward a widening of the application of compulsory publicity.

Many of the great corporations readily assent to this principle. But many practical men on the other hand also yet defend the method of the "blind pool" and regard publicity as impracticable and in many cases as fatal to business success. Every venture, great or small, they say, depends on a personality. A personality is the visible and decisive factor. On a man who has shown successful qualities other men bet their money. This is a simpler proposition than any proposition in terms of economic laws. For these reasons "the blind pool" is popular and attractive, and even many of the greatest combinations and undertakings are simply bets on leaders. Without daring leaders whom men are willing to trust almost blindly, business (so many successful men maintain) would lose its charm and its chance of large winnings, and compulsory publicity would reduce it to routine and lessen the chance of success. So the contention goes on between the principle of publicity and the principle of "the blind pool."

The flaw in "the blind pool" theory is that the interests of the public are not considered. Every large corporate undertaking touches the public in its activity, and, besides, offers some part of its securities to the public. It owes its very existence to public law. It is this view that President Roosevelt takes, and in the part of his Message in which he discussed "trusts" he shows that he is in line with the very best economic thought. He has put the whole question in a clearer way than it has before been put for practical uses; and the recommendation that he made is the best that either economists or statute-makers have hit upon. It coincides with the gradually formed conclusion that public opinion has reached.

"The Government," he says, "should have the right to inspect and examine the workings of the great corporations engaged in interstate business." . . . They "should be subject to proper Governmental supervision, and full and accurate information as to their operations should be made public regularly at reasonable intervals. . . . I believe that a law can be framed which will enable the National Government to exercise control along the lines above indicated; profiting by the experience gained through the passage and administration of the Interstate

Commerce Act. If, however, the judgment of the Congress is that it lacks the Constitutional power to pass such an act, then a Constitutional amendment should be submitted to confer the power.'

This is the definite proposition that will engage public attention until some form of National compulsory publicity is devised.

THE GRIM HUMOR OF THE ALABAMA ELECTION

THE franchise-restricting amendment to the Alabama constitution, the purpose of which is to eliminate the Negro from politics, was declared adopted by a majority of about 30,000. But ex-Governor Johnston maintains, after an analysis of the vote, that the election was carried by fraudulent returns from the black counties, and that a majority of the white votes that were cast were cast against the amendment. Few Negroes voted. But Negroes who did not vote were returned as voting in favor of the amendment. In other words, as the election returns appear, the Negroes disfranchised themselves; but, in truth, an amendment to the constitution was made by white men against which a majority of the white votes were cast!

This is rather grim humor. But the humor of revolutions is likely to be grim. For this method of restricting the franchise is frankly revolutionary. No such restriction could be made by a free and fair election in any State. It was proposed and planned and carried out as a revolution, and as a revolution it is frankly defended. So, too, with the similar amendments in the Carolinas, in Mississippi, and in Louisiana.

But in Georgia an effort to make a color-line restriction of the suffrage has again failed in the Legislature; and this failure is significant; for Georgia, too, has a very large black population, there being five Negroes to every six whites. The present franchise law makes the payment of taxes a pre-requisite of voting. This simple and proper requirement shuts out the thriftless Negroes, but it shuts out also the thriftless whites. It makes no discrimination on account of color.

It is probable that such a law as this, without the "grandfather clause" or any similar color-line device, would have accomplished the same result in the other Southern States and have made a revolutionary measure unnecessary. Georgia is to be congratulated on finding a way to restrict the suffrage that, so far as the law goes, is perfectly fair and that does not raise the race-question. Most important of all, it does not require force or fraud to put it into effect.

THE IMPOSSIBILITY OF RESTORING NEGRO SUFFRAGE

REPRESENTATIVE MOODY of Massachusetts introduced a resolution in Congress on the first day of the session providing for an investigation into the election of the members of Congress from Louisiana. His aim is to bring about the curtailment of Representatives from those Southern States where the suffrage is restricted on account of the color of the citizens. Since the disfranchised are of course counted in the apportionment of Representatives, Congressmen are elected in Louisiana and Mississippi and South Carolina by a mere handful of votes. Thus one voter in Louisiana has an influence in Congress as great as five and in some cases even as great as ten voters in Massachusetts.

Before the Southern representation in Congress can be curtailed it will be necessary to prove that the suffrage is restricted on account of the color of the disfranchised. That it is so restricted is obvious. But the restrictive amendments have been so drawn as to evade the real reason. It is doubtful whether proof of color-restriction can be got, in other words whether these amendments to these State constitutions can be declared unconstitutional. It will require some time even to bring a test case before the Supreme Court. And this would be the orderly method of procedure.

But a more immediate political effect could be had by agitation of the question in Congress, if the Republican party should take it up as a party measure. That the spirit of the amendments to the Federal Constitution which were adopted to protect the freedmen has been violated in these Southern States is obvious and is acknowledged; and this action is a confession that these amendments have failed of their purpose. But the Northern States have thus far acquiesced, or seemed to acquiesce, in this nullification of them, not because they approved it but because the remedy, if there be a remedy, might be worse than the disease. The South has been left to solve its own problem in its own way. To

open the question again will mean another outburst of sectional feeling. It may even provoke a wider breach between the races.

It is a situation that calls for the display of wisdom rather than of knowledge. The probability is that the policy of the last ten years or more will prevail, especially as long as the Republicans have a safe majority in Congress —the policy of building up the national feeling in the South and of regarding almost any misfortune as less than the misfortune of another period of sectional wrangling. Moreover, to take a practical view of the matter, universal Negro suffrage in the South has broken down or it has been pulled down—at any rate it has failed—and even the Federal Government has no power to restore it more rapidly than the Southern whites will permit. An effort to cut down Southern representation in Congress might or might not be successful; but whether even success in such an effort would compensate for the practical damage that it would do is a very serious question. The probabilities are that in the present party alignment nothing will be done.

THE NEGLECT OF THE WEST POINT ACADEMY

THE penurious policy of the Government towards the Military Academy at West Point during the last two or three decades may be a part of the general public indifference to the army during its long period of inactivity. But, whatever the cause, the Academy has suffered shameful neglect in its equipment. The last Board of Visitors has pointed out clearly the inadequacy and the obsolete character of the buildings. The cadets' accommodations are essentially the same as they were when the Academy was founded nearly a hundred years ago. The quarters are without bath-rooms; three cadets sometimes occupy a single room; the ventilation is bad; the lights are insufficient; the provision for the comfort and the convenience of the young soldiers is such as would not be tolerated in any modern private institution.

Of a piece with this obsolete physical equipment of the school is the narrow scope of its courses of study. The prime purpose of the curriculum when it was first made was to train army engineers. In addition to the mathematical studies required for such training there is now need of a wider knowledge than they receive of modern languages and of history and of international law. An officer of the United States army must now be an accomplished servant of his Government who may see duty in many lands; for his experience is not likely to be limited to garrison and scout duty in the West.

The Government has accepted plans for the complete rebuilding of the Naval Academy, and, when the work that is now in progress shall have been finished, it will be the best-equipped school of its kind in the world. The Military Academy deserves similar rebuilding, and delay is inappreciative and disgraceful. It is the more disgraceful and inappreciative because the Academy is in most essential respects the foremost military school in the world.

EXCLUDING THE CHINESE

THE Chinese Exclusion law will expire by limitation in May; and, unless Congress reënacts it, there will be no more restriction on the coming of Chinese laborers than on the coming of other immigrants. The series of exclusion enactments that have been in force has been an affront to the sense of fairness of many American citizens. We admit any other people by wholesale if they choose to come—Japanese, Italian peasants—people in fact from every other land if they be of sound body and mind. Col. Robert Ingersoll made an epigrammatic description of the deportation law, whereby Chinese laborers are returned to China, that has become a part of the literature of the subject. "It makes industry a crime and it puts one who works on a level with thieves." Not only has the exclusion policy been objectionable to the moral sense of a large part of our people. It is maintained, too, that the law is so successfully evaded that a constant stream of Chinese laborers has come through Mexico and British Columbia.

On the other hand the objection is made that Chinese laborers drive out of most employments the American workpeople. They live more cheaply and they accept lower wages. The labor unions of the Pacific Coast are strenuous in their opposition to their admission, and their exclusion is a logical part of our protectionist policy. If we admit cheaper laborers who underlive American workmen and underbid them in wages, and whose religious policy generally is not to live

in the United States permanently but to return to China when they have made their fortunes, we do that much hurt to American labor. Such is the pro-exclusion argument.

This argument, together with the opposition to the Chinese shown by the labor unions, will be the decisive factors in the controversy, and it is a foregone conclusion that restriction will be continued.

The number of Chinese in the United States is not very accurately known, for they evade the census-taker more successfully than any other class. In 1880 there were 105,000; in 1890, 107,000; in 1900, 119,000; and it is thought that there are now more than 150,000. About 50,000 of these are in California.

THE PHILIPPINE STATUS AND A PROGRAMME

THE decision handed down by the Supreme Court, in the Philippine cases, on the day that Congress convened, followed as it was expected to follow the same principle that prevailed in the Porto Rican cases. As soon as the Treaty of Paris was ratified, the Philippines ceased to be a foreign country. Consequently the Dingley duties collected in the United States on imports from the Philippines were illegal. By the treaty the islands became territory appertaining to the United States, as Porto Rico became—but not an organized Territory of the United States. It is competent for Congress to fix duties on imports either from the islands into the United States or from the United States into the islands. But the Dingley law does not apply without legislation. In other words, Congress may do what it will with the Philippines. It has power under the Constitution to provide for their government, or even to dispose of them if it chose. Their status is the same as the status of Porto Rico. There were also, as in the Porto Rican cases, dissenting opinions; and the court, as before, stood five to four.

Thus vanishes the last shred of "anti-imperialistic" hope; for our dealings with the Philippines will be determined by the same principles as the executive branch of the Government has hitherto followed. But the matter now rests with Congress. The President explained in his Message the duty of the United States to the Philippines in an eloquent passage. Events have brought it about that we can do nothing else but gradually prepare them for self-government at some far-off time not yet calculable, and in the meantime so to direct their affairs as to make our government of them a government for the benefit of the governed.

On the same day the court handed down a decision that the duties levied in Porto Rico on imports from the United States were legal.

THE SUNDAY OPENING OF SALOONS

AT the very beginning of the new era of decent government in New York City, the vexing question has come up whether it should be lawful for the liquor-saloons to be opened on Sunday. The problem in New York is very much more complicated than it is in smaller cities. Liquor-selling, in the meaning of the law, is not only rum-selling in low resorts. It is also the serving of drinks in gentlemen's clubs and in hotels; and it is the serving of beer and wine in the social resorts of that part of the population which keeps the habits of the Old World. A law that should forbid the sale of liquor at places of these widely different kinds simply cannot be enforced. It would be openly violated. Worse yet, it would open the way to police-corruption; and the very starting place of municipal reform is to make the corruption of the police as improbable as it is possible to make it.

As a practical matter, everybody knows that liquor will be sold on Sunday, be the law what it may. But theoretically the question is difficult. On one side is the plain fact that the old American conception of Sunday has yielded in every large city, and especially in New York, to the European conception—as a day of recreation and even of conviviality. These habits of a very large part of the population cannot be changed by statute. On the other hand the quiet Lord's Day of New England Protestantism, which is a good if somewhat sombre background of the sturdiest American character, is not passing without the protest of some of the best of the people. To throw open grog-shops on the Lord's Day seems to them to be inviting social anarchy.

On such a question unanimity of opinion cannot be hoped for. But the most demoralizing influences that can exist in any community are an open disregard of the law and the definite alliance of the police with the law-

breakers. These are worse evils even than the violation of a cherished religious habit. It is bad to have the corner groggeries open on Sunday afternoons, or at any time if they could be closed; but it is worse to pretend to close them and to put a premium on deception and bribery. And it is commendable to hold fast to the teachings of the fathers; but it is more commendable to see facts as they are and to try to solve present problems by the help of experience rather than by tradition.

SANITARY PRECAUTIONS AND INSURANCE RISKS

THE increasing intelligence and energy that are spent in preventing the spread of contagious diseases is one of the most hopeful activities of the time. By a practically concerted movement spitting has been stopped in public conveyances in most of our cities and towns within a year or two. The rapid spread of this very important improvement in manners and safeguard to health suggests the ease with which similar reforms may be accomplished. The prohibition of spitting was aimed chiefly at consumption; and the spread of this disease has been still further lessened by the refusal of the Government to admit consumptive immigrants. It has been declared a contagious disease within the meaning of the immigration law.

Another infectious disease, which hitherto has not been so regarded, has lately engaged the attention of the Board of Health of New York City. The board now requires physicians and institutions to report all cases of malarial fever, with a view to its possible extermination.

Another movement for the prevention of disease, especially consumption, is under discussion which has great possibilities—that the insurance companies shall issue to their policy-holders plainly written circulars of advice and precaution. There is no doubt that such a concerted movement would result in the prevention of many cases and in an appreciable saving to the companies, for it would receive the most respectful attention of most policy-holders.

Slow as we seem hitherto to have been in making known by threat and by advice, by law and through business channels, the simple facts of safe and careful living, we are making progress. It is a great gain to show that sanitary precautions pay. The time is coming when we shall be able to turn more police and commercial and social machinery to this great end. The time may even come when we shall no longer endure the upholstered sleeping-car and the unventilated railway coach.

THE HIGH BREEDING OF MEN

SIR FRANCIS GALTON, the distinguished student of heredity, lately brought forward again in the Huxley lecture before the Anthropological Institute of London, what is perhaps the most important subject that demands the attention of civilized society; and yet it is a subject that receives very little study, namely, the better breeding of men.

Much of our effort to improve human conditions is negative. We rescue the weak, and we preserve the unfit—which is to our credit. But there is a certain short-sightedness about such a policy, humane as it is. If we look at the well-being of the race rather than of the individual, the results of much philanthropy will appear negative, if not positively harmful. The larger positive improvement of the race can be made best by proper marriages. But what are proper marriages must be determined by some more accurate method than the present social organization of most countries permits. Galton's plan implies a social reorganization; and the difficulty of social reorganization is so great as to throw his proposal, as most persons will regard it, into the realm of the theoretical. But his distinct purpose was to present a plan for the improvement of the race that is practicable "under existing conditions of law and sentiment."

He divided the English people into classes according to their civic worth, ranging from brain-workers as the highest to loafers and degenerates as the lowest. His purpose was to encourage "an enthusiasm to improve the race so noble in its aim that it might well rise to the sense of a religious obligation." Such encouragement to marriage among those of the greatest civic worth might take many forms. Early marriages might be made the more common by providing dowries and by providing, in cases where such provision was needed, for help in the care of children; by bestowing honors for youthful and healthful motherhood; and most of all by the pressure of public opinion. A notable declaration in the address is this:

"If such people (the most capable) could be distinguished as children and were procurable for money, in order to be reared as Englishmen, it would be a cheap bargain for the nation to buy them at the rate of many hundreds or some thousands of pounds per head. . . . Some such 'talented' folk fail, but most succeed, and many succeed greatly. They found great industries, establish vast undertakings, increase the wealth of multitudes and amass large fortunes for themselves. Others, whether they be rich or poor, are the guides and light of the nation, raising its tone, lightening its difficulties and imposing its ideals."

Many competent observers have in recent decades declared that the generally democratic fashion of life in the United States produces better results in the mating of the civically worthy than the social life of any other country. So, indeed, it ought, for our theory of society, which excludes fixed castes, was meant to do precisely this thing. There are American families which show for several generations as great wisdom in marriage as was ever shown by any families in the world. The descendants of Jonathan Edwards, for example, are a most remarkable great company of the highly bred. They have held positions of honor in every calling, and their high level of civic worth continues for generation after generation. Many other American families have a similar history. And early marriages, made with some regard at least to civic worth, and large families, which are symptoms of social health, are yet the fashion among the most virile parts of our population.

Yet American society and the position that women hold in it give a freer opportunity than the social life of any other country for the exertion of such a public opinion as Galton recommends. And public opinion in the wholesomest circles of American life does exert in a general way the influence that he pleads for. The better organization of social forces for the high breeding of men may very properly be called the foremost duty of a democratic society.

THE RUSSIAN ADVANCE EASTWARD

IN Russia during the past year the crops fell off about six per cent., the prices of necessaries rose, and the condition of the peasants, who have large families and are commonly addicted to drink, was very pitiable. On the large agricultural holdings improved machinery of English, German and American manufacture has increased the cereal crops, but elsewhere old-fashioned implements and methods continue. The Government is seriously bent upon improving the condition of the peasantry, and the great Siberian Railway is expected to afford relief both by giving a new market for the crops and by facilitating emigration. The completion of the Eastern section which now connects Vladivostok on the Pacific with St. Petersburg, a distance of 6,500 miles, was announced in the beginning of November, but the road is still in a very imperfect condition. Permanent bridges must be built across great rivers, tunnels must be dug, and the roadbed improved; nevertheless a certain amount of traffic can pass. The somewhat mysterious Manchurian Convention which the Russian Government has been negotiating with China, carefully safeguards the railway, although Russia is to return control of Manchuria to China, and gradually to withdraw her troops.

Emigration from Russia to Siberia goes on steadily. The Government encourages it as much as possible. Fourth-class carriages carry a peasant about a hundred miles for twenty-five cents, and in cases of need the Government will lend $50 without interest. Land is allotted to the emigrant, sometimes as much as thirty-two square miles, and no taxes are laid upon him for three years. At every railway station there is a large public medicine chest, and an official somewhat skilled in medicine; there is also a big *samovar* ready to make tea, and food is given free to children, to the sick, and to the very poor.

Great undertakings require money and the Government is always in need of a loan; nevertheless, a new railroad is building, which will be 1,150 miles long and cost about eighty million dollars. It will extend from Orenburg on the European border north of the Caspian Sea to Tashkend in Turkestan and connect the Russian-European railway system with the existing Russian railroad in Central Asia, which runs from Krasnovodsk on the east shore of the Caspian Sea through Turkestan, roughly parallel with the northern boundaries of Persia and Afghanistan. This great connecting road will be of much commercial and military value. Thus the great northern empire slowly but steadily prepares its way to playing a great part on the world's stage.

THE TURK AS A UNIVERSAL NUISANCE

POLITICAL indications point to a time not far off when concerted European action shall put the Government of Turkey in a condition more satisfactory to the civilized world. One claim by the United States was collected only a short time ago and another is likely to arise in the case of Miss Stone, abducted on Turkish soil. Within the past month or two Great Britain has received £16,000 on account of a British claim respecting certain mines, and Austria-Hungary has exacted satisfaction for an attack upon her consul at Prisrend near the border of Montenegro. Russia is ready to assume complete control both in Europe and Asia, and Greece is asking permission of the Great Powers to annex Crete. In November France brought the whole Turkish question to everybody's mind. On behalf of private citizens she had presented pecuniary claims to the Sublime Porte, which dilly-dallied. France followed up these claims with demands in regard to French schools, hospitals and religious establishments in Turkey, requiring the Porte to recognize the legal existence of those institutions and their immunity from certain taxes as provided by existing treaties, and to grant the right to rebuild and restore such as had been destroyed during disorders in 1894-6, together with the privilege of establishing new institutions of these three classes unless the Porte should object within six months after notice. France also constituted herself the protector of Latin Christians in the East by requiring the Porte to recognize the Chaldean Patriarch. The Ottoman Government continued to dilly-dally, whereupon Admiral Caillard with two battleships, three cruisers and two torpedo boats sailed to Mytilene, a large island off the coast of Asia Minor near the site of ancient Troy, and seized the customs. The Porte promptly complied with all the French demands. M. Delcassé, the French minister of foreign affairs, had notified the Great Powers of his intentions, and no objections were raised. Great Britain was in no position to object; Russia gave France secret support; and Germany, with some unwillingness, acquiesced, because she desires a free hand in her Bagdad Railway convention with Turkey, which is to give her railway privileges from Konia in the Southern part of Central Asia Minor through ancient Cappadocia and Mesopotamia down to the Persian Gulf, with permission to run steamboats on the Euphrates and the Tigris. Well may the Sultan see the handwriting on the wall: "For nearly five hundred years thou hast been tried and been found wanting."

THE DISRUPTION OF NATIONALITIES IN AUSTRIA

EVERY six months Austria-Hungary illustrates more distinctly how nationality plays a great part in the present phase of civilization, either as a binding or a disrupting force. The Empire-Kingdom stands like a house of bricks without mortar; it is unstable in every part. There are not only the German-Czech provinces of Austria proper, and the Magyar kingdoms of Hungary and Croatia, but the Slavic provinces of Galicia, once Polish, on the north, and Bosnia, formerly belonging to Turkey on the south, besides the Italian cities of Trent in the Tyrol and Trieste on the Adriatic. Religious differences add to the confusion: four-fifths of the population of Austria and half the population of Hungary are Roman Catholics, but the rest are Lutherans, Calvinists, Mohammedans, Jews and members of the Greek Church. Politically, Austria and Hungary are at odds, and in Austria itself Pan-Germans and Czechs quarrel, fight duels and exchange insults with astonishing vivacity. Probably the anti-papal agitation is merely one element in the political contention. The cry *"Los von Rom"* expresses the desire not merely to be free from interference by the Vatican but to be free from Austria, because the Pan-German cause is naturally united in men's minds with Protestantism, and a war-cry of the latter serves for both. The Italians of Trent clamor for their union with Italy. Every man's hand seems lifted against his neighbor and there is much probability in the surmise that on the death of the present Emperor the Empire-Kingdom will break to pieces, the German fragments going to Germany, the Slavic to Russia, the Italian to Italy, and Hungary remain perhaps one of the little cluster of independent states in that corner of Europe. Just at present the only bond of union between the parts is commercial jealousy of the United States and the only amicable topic of general conversation in Vienna and Buda-Pesth is a European protective tariff.

THE GROWING NATIONAL FEELING OF ITALY

THERE is no better evidence of the national feeling in Italy than the universal rejoicing over the defeat of the Camorra in Naples. This city, the most populous in Italy, had been governed by a corrupt ring which lived by favoritism and corruption. The Neapolitan Croker who dominated the city government was one Casale. The reform party, composed chiefly of socialists, induced Casale to take a false step about a year ago. He sued a socialist newspaper, *La Propaganda*, for libel. The newspaper produced overwhelming evidence of the truth of its accusations. Casale lost his prestige, and the reformers followed up that success by a victory in the city elections. They were greatly aided by the report of the Royal Commission of Inquiry into Neapolitan municipal affairs, which had set forth in 1,820 pages proofs of corruption obtained from 1,300 witnesses. Italy is also striking a blow at the Mafia of Sicily by the trial of its "boss," Raffaele Palizzolo, on a charge of murder committed eight years ago. Thanks to the unity of Italy the modern business-like North is trying to help the ignorant superstitious South. A third indication of the resolve to maintain law and order is the capture of Musolino, the famous Calabrian brigand, a modern Fra Diavolo. His career reads like the libretto of an Italian opera. In 1897 he was convicted on the charge of attempt to murder, he claims unjustly. Two years later he escaped from prison and since then has wandered about Calabria killing his enemies, that is, informers, witnesses, policemen, everybody in any way connected with his conviction. The peasants supported and upheld him, just as the ignorant Sicilians aid the Mafia and the ignorant Neapolitans the Camorra. Practically the only solution of all these ills lies in the very difficult remedy of a public school education.

THE NEW PACIFIC EMPIRE

THE SIGNIFICANT BEGINNINGS OF A GREAT ORIENTAL TRADE—THE QUICKEST ROUTE FROM THE ORIENT TO ENGLAND IS NOW VIA SAN FRANCISCO—A FORECAST OF A COMMERCE THAT IS YET HARDLY DREAMED OF—THE BROADENING EFFECTS ON OUR OWN PEOPLE

BY

GEORGE HAMLIN FITCH

THE first general apathy in regard to the expansion of the United States into a world-Power, which Dewey's victory at Manila plainly prefigured, reminds one of the similar apathy in Congress when Senator Benton foretold the marvelous development of the great West which would follow the opening of trails and the subjection of the savage Indian tribes. It was customary in those days to call Benton's rose-colored prophecies "the perfervid imaginings" of an orator who was selfishly engaged in furthering the schemes of his son-in-law, Pathfinder Fremont.

Fiction never equaled the marvelous achievements of the settlement of California and the building of a great city within five years; nor of the construction of the first overland railroad over the snow-covered Sierras; nor of the Arabian Nights' expansion of San Francisco which defies sober fact and figure. And something of this same glamour clings about the tales brought back from the Philippines by the returning soldiers. These men, who have seen an inchoate American empire in process of evolution, tell of incredible hardships of campaigning in the tropics, of splendid forests of mahogany, teak and other costly woods; of placer deposits that surpass in richness the early bonanzas of California and the later El Dorados of the Klondike and of Nome; of swarming millions of Orientals whose trade is within our reach, if Americans only have the energy to reach out into the thick of it and take their proper share.

The growth of American trade with the Orient was very slow until the Spanish-American war brought the United States visibly before the eyes of the Asiatics and forced them to recognize the variety and the excellence of the articles exported from this country. The good effect of the stimulus of war upon trade was followed later by the attitude of the United States in China. Instead of grasping for territory and demanding enormous indemnities for petty losses, the United States tried in every way to protect China from spoliation, and the result is seen in the gratitude of the Chinese Government, which has done all in its power to favor Americans in trade and in commercial and mining concessions. The humane policy adopted by this Government toward China will prove the largest factor in the development of American trade in the Middle Kingdom. But this trade expansion is necessarily slow in an old and densely populated country like China, where the great mass of the people are so poor that they can afford no luxuries. Yet what were regarded as luxuries a few years ago have become necessities to the Chinese of today, as, for instance, kerosene oil, cotton and woolen goods, boots and shoes, and flour and other food products. The moment the Chinese begins to make money he spends his earnings liberally for better nourishment and better clothes. The spread of foreign customs in China, which is slow but sure, has already extended beyond the large seaports, and the return of educated young Chinese from abroad has aided in breaking down the conservatism that for so long prevented all classes of Chinese from changing customs sanctioned by centuries of use. Probably the most noteworthy feature of the increase of Oriental trade on the Pacific coast is the demand which has sprung up within the last few years for articles that formerly were never inquired for. Japan has done much to swell this American trade, for the Japanese are the keenest people in the Orient to appreciate the value of any novelty. They have also been the first to engage on a large scale in the manufacture of small articles of which Germany and France have had the practical monopoly. And the Japanese goods are now found throughout the Pacific coast and they will soon reach all parts of the Eastern States. Siberia has also become a large consumer of American products during the last few years, and the exports from the Pacific coast to the Czar's far eastern domain are increasing every month.

The official figures of exports from Pacific Coast ports show a total in 1890 of 44½ million dollars' worth; in 1896, 59 million; in 1898, 62½ million; in 1900, 73⅓ million. This in spite of a falling off in San Francisco exports in 1898 and 1900, due to the shortage of wheat and other crops in those years. In 1900, San Francisco exports amounted to more than half the exports by sea from the whole coast. The exports of San Francisco from January 1, 1901, to October 31, 1901, amount to $31,533,400, and this large figure would have been increased had it not been for the long strike which from last May until well into November shut up several of the largest shipyards, iron works and machine shops and for over two months prevented the proper handling of goods. The October exports were the largest in the history of the city. Of these exports the Orient, which includes China, Japan, Korea and Siberia, took over $1,000,000, and nearly $600,000 worth of goods went to Central and South American countries. To British Australasia and the South Seas the exports were $720,000; to the Philippines $70,000. Of the October exports, breadstuffs amounted to over $2,000,000, canned salmon $1,000,000, manufactured cloths $300,000 and canned fruits $52,000. One of the most remarkable features of this trade was the growth of exports to the Hawaiian Islands. Prior to annexation the exports to Hawaii from California amounted to $9,164,182, while the imports reached $11,596,634. Now the exports to Hawaii amount to $1,500,000 a month.

Financiers regard the bank clearings as the best index of the growth of trade, and the bank clearings of San Francisco show during 1901 a steady increase month by month over the previous year. In the first eight months of 1900 they were nearly $944,000,000; in the corresponding period of 1901 they were nearly $963,000,000. A conservative estimate for the whole year 1901 is $1,100,000,000.

To meet the remarkable growth of the export trade there has been a correspondingly large and sudden increase in shipping facilities; and plans are now under way which will make the ocean highway between San Francisco

and the Orient the route for the richest part of the world's trade. Five years will see a large part of the commerce that now goes from the Orient to Europe by way of the Suez Canal diverted to the Pacific Ocean route via San Francisco and New York; and less than this period will see all the mail matter for Europe transmitted by this swifter way. Six years ago only three regular steamship lines ran from San Francisco to foreign ports. This year there are ten large steamship companies which operate more than a dozen regular lines. There are besides coast steamship lines which ply between American ports and British Columbia and Alaska. To the fleets of all these companies additions are being made to meet the rapidly growing demand of freight and passenger service. Four steamers that are now building for one of these trans-Pacific lines are over 16,000 tons and six others are of 12,000 tons register.

The old leisurely voyage across the Pacific is to be exchanged for the swiftest passage in steamships, which in all the luxury of modern appointments will be rivals of the great liners that ply between New York and England. The North German Lloyd Steamship Company has recently made arrangements for extending its passenger and freight line from Hong Kong to San Francisco. The Pacific Mail Steamship Company is building four of the largest passenger vessels in the world for its regular service between San Francisco and Hawaii, Japan and China. The Occidental and Oriental Company is also increasing its equipment, and the Japanese steamship line which runs between San Francisco and Nagasaki is also providing new vessels for its growing service. The Oceanic Steamship Company has a practical monopoly of the service between San Francisco and Hawaii, Tahiti and Australian ports. Its vessels are fine and swift, and so great has been the energy of John D. Spreckels & Brothers that they have recently secured the contract for carrying the Australian mails by way of San Francisco. They demonstrated that they could deliver mail from Sydney to London by way of San Francisco and New York three and one-half days quicker than the Peninsular & Oriental steamship line could carry it by way of the Red Sea and Brindisi. The Tahiti steamship line, recently put into service by John D. Spreckels, has opened up new markets for coast goods and has given to tourists the most beautiful tropical vacation trip in the world, among picturesque South Sea islands that have not yet been spoiled by civilization. The Kosmos steamship line, a Hamburg corporation, operating steamers between San Francisco and Central and South American ports, has been compelled to secure several new vessels, and its success has stimulated the Sud Americano Company, a Valparaiso corporation, to extend its service from Mexican ports north to San Francisco. The Pacific Steam Navigation Company has extended its service as far south as Valparaiso, and has six new steamships almost completed for this line, which has more business along the Central and South American coast than it can handle. Then to this long list must be added a British-American line which has recently begun a regular service between San Francisco and Callao, Peru.

The trade between the Pacific Coast and Russia's possessions in Siberia and Manchuria is growing so rapidly that soon a steamship line will be established between San Francisco and Vladivostok. The exports of flour, lumber, machinery and mining materials to Vladivostok have increased rapidly during the last two years, and several Russian capitalists have been considering the establishment of a regular freight and passenger service, independent of the Japanese line that now runs by way of Nagasaki. And before another year is ended a regular steamship service is sure to be put on between San Francisco and Manila, thus removing the tedious delay of reshipment at Hong Kong. An attempt has been made by the San Francisco Board of Trade to secure Government aid for such a service to Manila, and a committee that went to Washington for this purpose recently returned with encouraging assurances of support.

In addition to all these steamship companies, there are well-founded reports that the great transcontinental railroad companies are preparing to bid for this rich trade from the Orient. The Santa Fé Company has secured terminals on San Francisco Bay, and is providing for depot accommodations in San Francisco on a scale beyond all the needs of its present service for many years. This leads to the conclusion that one of its projects is the establishment of a great steamship

service to connect with its overland road at San Francisco. If this should be done the Harriman syndicate of railroads would be obliged in self-defense to establish a similar line in order not to be distanced in ocean competition for Oriental freights.

Hard-headed business men, who are not given to sanguine views, see in these enormous preparations of large corporations sure signs of an unexampled increase in the trade of the Pacific Coast with the Orient, due to the opening up of the Philippines. When exports increase by leaps and bounds, and when, without the aid of any stimulus, trade increases in geometrical ratio, it must be admitted that the future holds tremendous possibilities for the Pacific Coast in that expansion which President McKinley outlined in his last public address. Nothing can prevent the rapid and continuous development of American trade with Hawaii, the Philippines and the Orient. California and the Pacific Coast have the virtual monopoly of trade with the Hawaiian Islands, which under annexation are rapidly becoming Americanized. The old element that is antagonistic to Americans is rapidly dying out, and the new generation, trained in the public schools, will be as thoroughly American as though born on our shores. The sugar industry has reached very large proportions, and it will continue to increase. Of course, in the future such profits as from twenty-five to forty per cent. in one year cannot be expected, but the Hawaiian sugar plantations, even with Cuba and Porto Rico restored to their old productiveness, are certain to yield large returns on the investment of American capital.

But the greatest field of American exploitation is the Philippines. Restricted as that field has been by reason of the unsettled condition of the interior and the rigid rules of military government, American observers have already noted the richness of the country in great natural products like hemp, sugar, tobacco and rice, in the forests of valuable timber and the gold fields. All these products, when developed by American energy and skill, will be the astonishment of the world. The Filipinos will rapidly become Americanized and will adopt our customs and buy our goods. The Filipino is imitative like the Japanese, not stolidly conservative like the Chinese. As soon as he becomes accustomed to American ways he will be as large a consumer of American goods as his means will permit.

Throughout the Orient the most significant feature of recent trade is the great demand for American manufactures, especially in machinery, electrical apparatus and locomotives and railway material. Large orders for electric power plants have been filled recently in San Francisco for Seoul, Korea, and Mysore, British India, while from Siam and even the Dutch East Indies have come extensive orders for American machinery. The same thing is true in regard to Australia, which is a large buyer every year of a line of Pacific Coast manufactures peculiarly adapted to the climate and soil of the great island continent.

One of the leading items in San Francisco's shipping which has not yet been considered is the United States Army Transport Service, which was begun May 28, 1898, when the Government sent its first troops to land on foreign soil. San Francisco at the time was the natural forwarding point for the shipping of the army and its supplies, as the establishment of a line of transports from New York to Manila over a route leading close to Spanish shores and through a neutral canal could not be thought of, and the facilities at Seattle were unknown and problematical. The service has gradually developed into an efficient organization on a permanent basis, and it is considered a demonstration of a successful system of over-sea military transportation. So thorough was its equipment and so satisfactory were its results that at the time of the recent operations of the allies in China the German Government used it as a pattern in transporting its troops. For the maintenance of American troops in the islands it has been a perfect ferry to the Government's outlying ports, and from an administrative standpoint an absolute necessity.

The first vessels were chartered from private concerns and the details of fitting them up were left to the owners, who paid no special attention to ventilation and galleys. Thus the soldiers were sent to sea under conditions not good for health or comfort. This action caused numerous scandals, and the Government quickly recognized the inefficiency of the system and after securing Folsom Street wharf, which has now become one of the most famous docks in the world, established the

transport service, the chartered ships being steadily replaced by the army vessels. Fifteen vessels are now included in the service from San Francisco, but during the three years of the system 228 chartered and Government-owned transports have been used between this port and the Orient and Alaska. The Government vessels are in two separate classes—passenger and freight ships, and both classes include some of the largest and finest steamers on the Pacific. They are elaborately equipped with all the latest improvements. Each vessel has a refrigerating and ice-making plant, and the passengers are furnished with fresh meats and vegetables during the entire voyage, which usually occupies about thirty days. Hospitals, treasure rooms, prisons and suitable apartments for courts-martial and other official business are well arranged, and each transport is virtually a floating army post, with accommodations for at least 1500 troops and officers.

Experience has demonstrated that a transport service conducted by a commercial company would be as impossible as a contract commissary for the entire army. It would give the subsidized company a monopoly and would render competitive bidding impossible. Besides, none of the commercial companies of the Pacific coast have vessels suitable for the service. The transport service has more than paid for itself, and only in two instances—when animal ships had their cargoes killed during typhoons in the Inland Sea—has any loss been charged against the system. Each transport saves the Government between $100,000 and $150,000 on a single trip, these figures being based on the lowest contract rate offered the Government by commercial lines. The carrying of the mails free of charge has saved the Post-office Department fully $500,000 since the beginning of the war in the Philippines, and the Treasury Department was spared the expense of $300,000 in the shipment of money to the outlying possessions. To Brigadier-General Oscar F. Long, United States Volunteers, is due the credit for the present efficiency of the service. He has performed his duty most thoroughly and with rare good judgment.

Now, what have been the chief effects upon the people of California and the Coast of this great industrial awakening and development? Perhaps the most immediate effect was a remarkable quickening of the national feeling and a profound stimulus to patriotism. The trade possibilities which this opening up of the Orient meant for the United States and especially for California and the whole Pacific Coast were not lost sight of, but first and foremost came a great wave of patriotic ardor that reminded one of the similar outburst of patriotism after the firing on Fort Sumter. The eagerness of young Californians to enter the army or the navy was the most gratifying feature of this aroused national consciousness. Men left lucrative positions to accept a place in the ranks; they uncomplainingly endured needless hardships in order to be first to go to the scene of the fighting on the other side of the Pacific; they bore the monotony of drill and the irksome restrictions of military discipline with a patience that furnished the finest proof of their sincerity, for the young Californian is not given to obeying orders and he has very little reverence for authority.

There was a quick change of the public attitude toward the regular army. The former ill-concealed contempt of the young Western man for the regular soldier was due to the fact that the soldier was for years forced to do a large part of the police duty in the West. A certain lawlessness, a certain hatred of all forms of Federal surveillance, still lingers in the Far West, and this feeling has been kept alive by the unyielding military discipline, which made no allowance for time-honored customs or the freedom of the plains. So the antagonism between the military and the people has smoldered, blazing out now and again during Indian troubles. But Dewey's guns swept away all this hard feeling, swept clean away all the old suspicion and dislike. In its place came a strong sentiment of comradeship, which made the volunteer fraternize with the regular and fight with him shoulder to shoulder; which made the "hustling" business man take a day off and go out to see the soldiers drill and to cheer their manly bearing and their evident desire to fight.

This new sentiment was seen in the exhibitions of public feeling in San Francisco when our troops embarked. As the First California Regiment marched down Market Street through a narrow lane of thousands of spectators there came a great roar of welcome and farewell that drowned the blare of many bands. Men whose faces showed the deep-graven lines

of self-control tried to shout and found a lump in their throats that prevented speech. Others, with tears running down their cheeks, turned aside and swore to cover this confusing evidence of deep feeling. Women cheered hysterically and waved flags and handkerchiefs. Even the children were lifted out of the rut of everyday life and received an object lesson in patriotism which was stamped upon their memory. It was such a spiritual awakening as one may see at a great religious meeting when a pulpit orator sways his audience and carries them with him, ardent as children, to heights of generous self-sacrifice.

That farewell to the California Regiment, which led the way for the army of volunteers across the Pacific, marked the beginning of an outburst of patriotism that found vent in gifts to all the soldiers and in a hearty good-will and sympathy that warmed the heart of every strange soldier boy.

Scarcely less strong than this patriotic awakening was the stimulus to the national feeling, the enlargement of the mental horizon of the people. Heretofore the Orient had been to Californians and the people of the Pacific Coast a place from which came such hordes of Chinese coolies that at last it was found advisable to bar them out by a rigid exclusion law. Between the Asiatic coast and the Pacific slope there was no point of contact, no national or commercial sympathy. Then almost in a day the Pacific Coast came to see that here was a new tropical archipelago which must depend in large measure upon them for American goods and American managers. The popular ignorance of the Philippines was almost as great on the Coast as in the Eastern States. But teachers of Spanish, who had eked out a precarious livelihood, now found the day too short for the number of their pupils. Merchants, lawyers, teachers, mechanics of all kinds made inquiries in regard to the openings for them at Manila, and hundreds of adventurous young men gathered up all the means they could and took the first steamer for Hong Kong. These adventurers were not daunted by the warnings that they could not go into the interior country, but must be content to remain in and around Manila. They argued that if there were any chances for money-making they would not be last in the race for the dollar. And much of this confidence in their own powers was fully justified. Fortunes were made by poor Americans in a few months in ways that would only suggest themselves to men of Yankee ingenuity and resources. One man made thousands of dollars in a month by establishing an excellent steam laundry and running it in a business-like way, with no introduction of the *mañana* principle that governs all trade in the tropics. Another started a general variety store and sold small articles to soldiers; still another established a bakery. It was the eye for the necessity that was in demand which brought fortune.

Californians who have investigated the resources of the Philippines are sanguine of the great field which stable civil government will open up there for enterprising young Americans. Wherever the American goes he takes with him the restless activity and the thorough trade methods which have made this nation the greatest in commercial history. Not even the tropics have power to subdue his energy. So we may expect to see him exploit the rich natural resources of the Philippines in a way that will make British development in India and the Straits Settlements and Dutch development in Java and Sumatra seem to belong to another age. And most important of all in immediate results will be the exploitation of the mining resources. When the placer grounds of Mindanao are open to prospectors, California mining experts declare that the greatest gold rush in the world's history will be seen. The historic gold rush to California in 1849, the equally historic and picturesque stampede to the Klondike four years ago, will be dwarfed by the descent upon Mindanao and other islands of miners and adventurers from the Pacific Coast, Alaska, Siberia, South Africa and all other mining centres. When these men, full of courage and daring, invade the islands, the Philippine question will be settled as speedily as the question of California's Americanization was settled by the Argonauts of 1849.

The reflex influence upon California and the Pacific Coast of the opening up of the Philippines and the creation of new markets in all the Oriental possessions that border the Pacific Ocean, as well as in Australia and the South Sea islands, has already begun to be felt. This is shown by the increase of trade, by the new commercial and industrial enterprises which have been begun, by the increase

Coyyright, 1900, by J. D. Givens

THE GOLDEN GATE FROM SUTRO HEIGHTS

in population in San Francisco, in Los Angeles, in Portland, in Seattle and other large cities of the coast; and, more than all, by a new cosmopolitan spirit which has succeeded to the old provincial methods that were born of long isolation from the East and the rest of the world. In close touch with all the great Pacific Ocean Empire by steamship lines and soon to be in closer touch by new cable systems, the Pacific Coast States are fairly on the road to the vast development marked out for them by climate and geographical position. And at the centre of this new activity, at the natural gateway of the richest trade of the Orient, stands San Francisco, looking out from her many hills upon the noblest bay in the world, and destined in the next fifty years to rival New York in the extent and variety of her commerce and manufactures.

Photographed by Charles Weidner

ALONG THE WATERFRONT AT SAN FRANCISCO

OXEN TRANSPORTING GOODS IN THE TRANSVAAL

THE ADVENTURES OF AMERICAN GOODS ABROAD

HOW THE PRODUCTS OF OUR MILLS ARE CARRIED IN VARIOUS LANDS — BY CAMELS, DOG TRAINS, CANOES, JINRIKSHAS, LLAMAS, MULE TRAINS AND MEN CARRIERS

BY

HENRY HARRISON LEWIS

SEVERAL months ago a New York exporting house received in the usual course of its business an order which threatened to shatter its most cherished boast —that it could supply anything made by man and send it to any part of the habitable globe. The order was for a large quantity of general merchandise, and it came from a German merchant in a small town twenty-five miles from Vladivostock, Siberia. He wrote :

"The roads are bad, and there are no means of conveyance save by ordinary carts ; and, since some of the goods I want are heavy, I don't see what you can do. I leave it to you. The order is yours if you can deliver the articles at the door of my shop."

The question was serious. It meant far more to the exporting firm than was involved in the loss of the order. It was a direct challenge to prove the truth of its widely heralded boast. There was also a strong patriotic appeal to the firm.

"The whole question resolves itself into this," said the senior partner. "We've not only got to supply the goods, but we must also furnish the transportation. Shipping from here to Vladivostock is merely a question of packing and ocean freights, but to carry many tons twenty-five miles over indifferent roads is another story."

There was a prolonged discussion and finally after an exchange of several cable messages, the goods were started on their long journey to Vladivostock. The steamer carrying the merchandise carried also certain pieces of machinery and a representative of the ex-

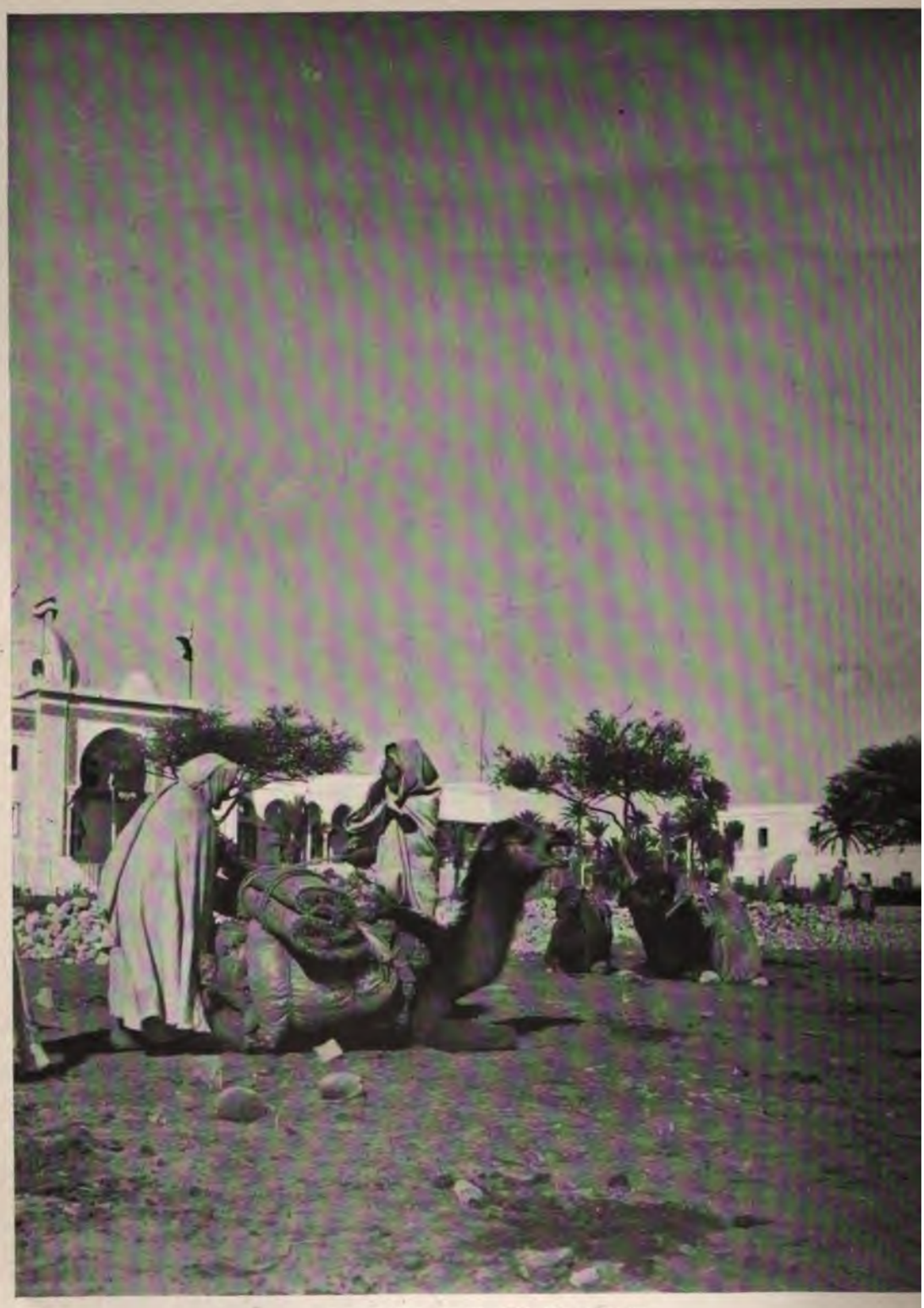
porting house. Several days after the steamer landed there rumbled through the Siberian town an American-made traction engine with several broad-tired wagons behind. The merchandise loaded upon the wagons reached the shop of the German merchant in due time; the traction engine and its train were sold to good advantage in Vladivostock; and another victory was added to the long score of triumphs of Yankee ingenuity.

The subject of transportation is not the least important of the many questions which confront the exporter. News of railway or road building in foreign countries or the extension of steamship lines is received with deep interest. The progress of the Trans-Siberian Railway, for instance, nowhere excited more attention than among the exporting manufacturers of this country. The reports made in the daily press from time to time were eagerly read, and when the practical completion of the road was announced, the fact was posted in many chambers of commerce.

AN INDIAN MOUNTAIN CART
In Bolivia

Two other engineering feats of gigantic proportions now absorb the attention of our

A CARAVAN RESTING
Outside the wall of Pekin



LOADING FREIGHT IN EGYPT

A NATIVE WHEELBARROW AT TIEN TSIN

A TEAM IN INDIA

exporters, and their consummation will alter the commercial conditions of the world. One is the trans-isthmian canal and the other is the African Cape-to-Cairo Railway, work on which will again become active when the South African troubles finally are adjusted. The impetus that these will give to the world's trade and the opening of new markets is almost beyond the limits of computation.

The various classes of articles that we export exceed two thousand, and at least two-score countries are reached by American goods. Just what this statement means can best be explained by quoting a paragraph from a report recently made by Consul-General Stowe of Cape Town, South Africa. He says in part:

"To make a list of all the articles of American

AN ALASKAN PACK TRAIN

A RAFT OF BAMBOO POLES
At Shanghai, China

manufacture sent here during the last four years would require many pages. We cannot enter a home without seeing some greatly appreciated American-made articles. Our kitchen-ware and furniture adorn many a home. The natives are astounded when they see light, strong and efficient American agricultural implements at work in the field. The American organ is a frequent

A FREIGHT BOAT ON THE NILE

sight, and scholars sit in the schools at neat and comfortable desks made in America. American pews in the churches make poor services less tedious. The old and heavy English knives and axes are passing away and the American hatchets and scientific axes are cutting the kindling-wood for the home and hewing down the forests. Where six yoke of oxen were once seen pulling an eight-inch plow, our American plows with one yoke now do the work; and the day is fast disappearing when it takes from six to eight yoke to draw a wagon. One American wagon, carrying the same load, can be drawn with two yoke or a good team of horses."

The organs and desks and agricultural implements mentioned by him as being in use in all parts of South Africa also are in use in almost every part of the globe. The manufacturer of plows, for instance, in filling the orders received in his daily mail, is compelled to keep the problem of transportation constantly in mind. Shipments to the European countries where railways and navigable waterways furnish adequate facilities are simple; but the growing needs of civilization have created a demand for modern plows and innumerable other articles of American make in such remote places as Persia and Patagonia and Central Siberia.

The manufacturer who exports direct is thus called upon to pack his goods in different ways for different countries. If he sends dress goods, first, strong boxes are made to hold a certain number of pieces. The goods are then packed in firmly, each piece being wrapped in strong glazed paper. The box itself is lined with oiled paper, so as to preserve its contents from dampness; it is then strapped with iron bands.

If the shipment is to be made to Africa, or Australia, the pieces are wrapped in oil paper and the cases are lined with tin. The tin is carefully soldered to make it weather-tight. The shipper knows that these precautions will suffice for probably the majority of countries, but there are some where it is necessary to have goods packed in small compass for transportation on the backs of native carriers, as in Persia and parts of Africa.

Until 1895 the American packed bale or box was notorious for its crudeness and lack of strength. The boxes were loosely nailed, and the bales so carelessly strapped that foreign buyers found that they could save money by purchasing their goods in Europe

at a higher price, so serious were the losses by the faulty packing of the American shippers.

Several years ago while in San José, Guatemala, I had occasion to watch the unloading of a Pacific Mail steamer. As the port was an open roadstead and there was only a short iron pier, it was necessary then to transfer the cargo from the anchorage to the shore in lighters. The various packages and bales, some containing heavy pieces of machinery, were lifted from the hold with winches and then lowered into the boats, which tossed and rolled upon a heavy swell. The first half dozen boxes bore the marks of firms in Germany. They were deposited in the bottom of a lighter with a jolt, but they escaped damage. Then a large case from Chicago appeared through the hatchway and was swung out and down just as the cargo boat rose upon the crest of a wave. The men at the winch and those in the lighter acted quickly, but an instant later the sound of a crash came from below, and the purser at my elbow exclaimed resignedly: "I thought so. Humph! the least jar just knocks them all to pieces. That box contained hardware and it was simply nailed. Not a sign of a strap or anything. And the wood was thin pine. I'll wager it will be the last order the firm will get from this place. It's queer the manufacturers at home don't realize that German exporters hold this market, and with an inferior line of goods, too, just because they get their goods here without breakage."

A PACK HORSE AT NAGASAKI, JAPAN

An instance of the picturesque features sometimes accompanying the transportation of goods in foreign countries will be found in the case of a consignment of merchandise destined for a small store attached to a cattle ranch thirty odd miles north-east of Cordoba, Argentine Republic. The goods were ordered in New York, and the shipping directions read, "Pack in small cases and bales for cart transportation, and ship via Buenos Ayres." The consignment was sent to Liverpool as

KANAKA BOATMEN
Hawaiian Islands

there was no direct line running to the River Plate then, and transferred to a Pacific Steam Navigation Company's boat which carried it to Montevideo. The goods were taken across the La Plata on a river steamer to the anchorage five or six miles off Buenos Ayres and finally landed on Argentine soil with the aid of a sailing lighter and a great wheeled cart which was found necessary because of the shallowness of the water. From the wharf

A DOG TRAIN IN BRUSSELS

the goods were conveyed to the freight shed of the Buenos Ayres and Rosario Railway, and then after some delay forwarded to Cordoba. Here several broad-tired wagons drawn by wiry Pampas horses carried the merchandise to the end of the Government road, then because of recent rains, the bales and cases were repacked in smaller compass and finally delivered on the backs of a small troop of horses, bullocks and native peons to the ranch owner. The goods had traveled more than 12,000 miles by water, and had

PERSIAN CARRIERS

been transshipped seven times, and carried by seven methods of conveyance.

The llama of South America, that remarkable and picturesque beast of burden, is slowly but surely disappearing before the locomotive. On both slopes of the Andes, in Peru and Chili and the Argentine, railways are winding through passes and climbing steep grades.

In darkest Africa conditions are similar. It is surprising to read that the supposedly uncivilized continent now contains more than 12,000 miles of railways, fully equipped for traffic. In Algeria, Tunis, French Soudan and Somaliland alone there are 3,428 miles of road, and the Congo Free State has one railroad 275 miles in length.

It is difficult to imagine an engine with the ear marks of an American factory fresh upon its hot, steaming, cylinder boxes, puffing noisily through the dense leafy shades of an African forest, and to picture to one's self a Somali black tumbling from the door of a freight car a package inscribed "From Chi-

NATIVE BOAT NEAR MANILA WITH BAMBOO REED SAILS

A BURRO TRAIN IN THE CITY OF MEXICO

ACROSS COUNTRY IN BOLIVIA

cago to Butsuma via Mombasa." The half-naked pack bearers, sons of those who carried goods for Livingstone and Stanley, and later for German and Portuguese traders, are threading their last paths.

Korea, the hermit kingdom, is the scene of renewed activity in railway building. A steamship line has been established between Odessa and the Persian Gulf. There also is news of a Trans-Baikal Railroad, and of electric lines in the Canary Islands. In China, the primitive barrow, used since the beginning of man as a laborer, is giving way to American rails and American railway appliances. The Holy Land was invaded several years ago, and echoes to the screech of a locomotive whistle. Alaska, fairly in the shadow of the Arctic night, has better transportation facilities than some States had a few years ago.

A HERD OF LLAMAS IN PERU

IN THE COURTYARD OF THE UNITED STATES CONSULATE AT HARPUT, TURKEY

The consul is in the centre on horseback. His bicycle, the first in the region, is leaning against the tree at the right

TO REORGANIZE THE CONSULAR SERVICE

TO MAKE IT PERMANENT AND TO DIVIDE IT INTO CLASSES, SO AS TO OPEN TO GOOD MEN PERMANENT CAREERS — AN INSIDE VIEW OF THE SERVICE AS IT NOW IS

BY

GAILLARD HUNT

CHIEF CLERK OF PASSPORTS IN THE DEPARTMENT OF STATE

AN interesting series of maps was exhibited by the State Department at the World's Fair at Chicago, and more recently at the Buffalo Exposition, showing the growth of the diplomatic and consular representation of the United States from 1776. In that year we had one legation—at Paris—and in 1780 the first consul was commissioned; in 1800 there were a dozen legations and twice as many consulates, including one at the foreign port of New Orleans; in 1840 the service had doubled; in 1880 the consulates were scattered over the whole world; and at the present time there are 318 principal consulates, nearly all with agencies under them, and the whole consular service numbers more than 1200 men.

There is nothing remarkable in this increase, for the crossing of the *Savannah* under steam-power from America to England in 1819

IN THE CONSULAR OFFICE AT WOODSTOCK, NEW BRUNSWICK

marked the beginning of the close neighborhood of the world, and in the competition to gain control of the world's markets Americans have played a foremost part. That there should be constant increase in the number of official guardians of our ever-expanding commerce is thus only to be expected.

But what is truly remarkable is that the increase in consular representation should have been accomplished without the assistance of any general legislation, and that the consular service existing at the beginning of the twentieth century should have for its basis the laws providing for an insignificant establishment created at the close of the eighteenth century. "The consular system of the United States," said Senator Morgan in a report to the Senate in 1895, "has remained practically unchanged since the time it was called into existence on a small scale by the acts of July 1, 1790, and of April 14, 1792, and kept alive by a number of subsequent unimportant acts;" and in the same report he declared that the so-called "act to remodel the diplomatic and consular systems," passed March 1, 1855, had in reality enlarged the old system without changing or improving it.

THE CONSUL'S OFFICE AT IQUIQUE, CHILE

THE CONSULATE AT AMSTERDAM

This stagnation has not been accepted without complaint; on the contrary, successive Secretaries of State and others familiar with the facts have urged action for nearly a hundred years—notably Edward Livingston

AT VALENCIA, SPAIN

in 1833, James Buchanan in 1846, and Mr. Frelinghuysen in 1884, beside many others. It is not the complaints of the past that concern us so much, however, as the efforts that are made at the present to raise the foreign service of the Government to the high level occupied by the home service which has had the benefit of progressive legislation.

It is now six years since Senator Morgan introduced a rather crude measure having for its object the reorganization of the diplomatic and consular service. It was drawn by the late François S. Jones, then of the State Department, and after it went to the committee it was improved. Later the diplomatic service was dropped out of the project, as likely to hinder its progress. From the Morgan or Jones bill has sprung a goodly crop of other bills presented at various times in Senate and House. To induce favorable action upon the principle which all of them embody, a movement outside of Congress was organized three years ago by Mr. Harry A. Garfield, then the President of the Cleveland Chamber of Commerce, and has been actively carried forward by him and his coadjutors since then. "We are business men, or the associates and representatives of business men, and it is through those associations that we have been led to

WITHIN THE CONSULATE AT CHIHUAHUA, MEXICO

THE UNITED STATES OFFICE AT BATAVIA, JAVA

take an interest in this subject," said Mr. Garfield, in his statement before the Senate Committee on Foreign Relations in March, 1900. Action is thus urged, not by sentimentalists nor habitual political grumblers, but by men of affairs, who have a practical interest in international commerce, who declare that their interests suffer because the existing consular system is bad, and who would profit if it were improved. The following list of the commercial bodies which have spoken in advocacy of the reform is confessedly incomplete: the Norfolk (Va.) Board of Trade; the Portland (Me.) Merchants' Exchange and Board of Trade; the Charlestown (S. C.) Chamber of Commerce; the Chamber of Commerce of the State of New York; the Boston Chamber of Commerce; the Merchants' Association of New York; the Chamber of Commerce of Denver; the Memphis Produce Exchange; the Board of Trade of Baltimore; the Chamber of Commerce of San Francisco; the Board of Trade of Scranton; the Chamber of Commerce of Portland, Oregon; the American Asiatic Association; the St. Paul, Minneapolis, Cleveland and Chicago Chambers

THE CONSULAR AGENCY AT EIBENSTOCK, GERMANY

of Commerce; and the Boards of Trade of Peoria, Detroit, Washington, D. C. and Wilmington, Delaware. Surely a demand coming from organizations representing so completely the commercial supremacy of the country cannot be disregarded.

That the service should be completely reorganized hardly admits of discussion, but some of the criticisms that are made of its personnel should be put aside as unworthy of serious consideration. Idle Americans, having a narrow circle of interests at home and a still

THE CONSULATE AT STUTTGART, GERMANY

narrower knowledge of life abroad, are apt to measure the consuls they meet by the scale of fashionable society, and to condemn them because it seldom fits them. A consul's duties are not those of a courtier. His is the busy world of trade, and a finished drawing-room education is not essential to his efficiency. Unjust condemnation comes also from an opposite type of the American traveler. Aggressive tax-payers, impressed by the fact that they pay official salaries, going abroad for the first time are likely to become indignant at the slight attention they receive from

THE CONSULATE AT COLONIA, URUGUAY

the consuls, forgetting how purely personal their affairs are and that a consul has official duties which occupy all his time. Nor can he attend zealously to these duties and avoid complaint from a certain class of American merchants, who have no experience or knowledge of foreign trade. They expect a consul to be in effect their agent and to supply them with elementary information and advice. A consul is no merchant's drummer, but all merchants have a right to expect him to assist in the extension of American trade abroad, by finding new markets for American wares,

THE QUARTERS OF THE CONSULATE GENERAL AT BERLIN

IN THE CONSULATE AT VERA CRUZ, MEXICO

by guarding jealously the old markets, and by keeping ever upon the lookout for new fields of profit for American enterprises.

While much of the abuse of the consular service which is commonly heard is not intelligent, it must be admitted, on the other hand, that much of the praise it receives is not wholly disinterested. Those who profit by the present iniquitous system of appointment contrast our service with that of other countries and insist that ours is superior; but even if it were, the fact would merely prove

THE CONSULATE AT CIUDAD PORFIRIO DIAZ, MEXICO

THE CONSULATE AT LONDON, CANADA

Photographed by Hollinger

JOSEPH H. CHOATE

Ambassador of the United States to England

Photographed by Pach Bros.

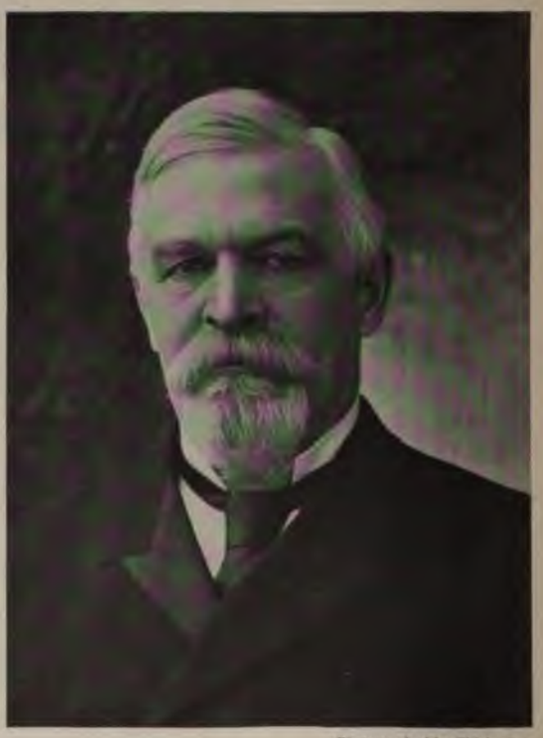
HORACE PORTER

Ambassador of the United States to France

Photographed by Hollinger

ANDREW D. WHITE

Ambassador of the United States to Germany



Photographed by Chickering

WILLIAM M. OSBORNE

United States Consul-General at London

that other countries are even worse off than we are. The argument of international comparisons used to be invoked in behalf of the spoils system in the Federal civil service before the enactment of the law of 1883. Our civil service was then better than that of most foreign countries, but it was disgracefully bad, nevertheless—a fact which those familiar with the old and the new conditions cannot honestlv deny. A properly reorganized consular service would, in a few years, present a similar contrast to present conditions.

Nevertheless, the consular service as it stands today is, taken as a whole, a fairly good service, because the consuls have had the benefit of five years of training and experience, and because some of the worst officers have been weeded out. But if a Democratic President should succeed Mr. Roosevelt, the training and the weeding out would avail nothing; and we should have, as we have had on the occasion of each change of administration in the past, a ruthless disorganization of the service, the dismissal of the good and the bad, and the appointment in their places of new, untried, and consequently incompetent men; and it would be several years before the service would again become fairly efficient. All this is sure to happen, sooner or later, unless the existing system of appointments to office and dismissals be changed by law. This system is stronger than any President, and an effort to rise above it or to change it becomes, in the absence of supporting law, a mere isolated act of temporary benefit.

The consuls' duties are not generally understood; and even those who have themselves served as consuls are disposed to let a limited experience at one post stand for a knowledge of a very extensive and diversified field. The "Consular Regulations" is a volume embracing in all 1,734 numbered paragraphs, and it conveys an idea of how different the consul's duties are in different parts of the world. In English-speaking countries he is merely a commercial agent, and his duties involve many details with no political complications. On the Continent, on the other hand, as the nearest agent of his Government, he is constantly appealed to for assistance by naturalized Americans who suffer molestation from the local authorities. When an American is tried he must see that justice is done. In the countries south of us, where governments are unstable, he may be called upon to assume extraordinary responsibilities for the protection of American life and property. In China, Korea, Madagascar (partiallv), Muskat, Morocco, Persia, Siam, Tripoli, Tunis and Turkey, the consuls hold court, try cases, have power to fine, to imprison, and even to pronounce sentence of death upon American transgressors. It can readily be seen from this that the consular service is one of the most responsible of all the branches of the Government.

A few words about the chief measure of reorganization presented to Congress, namely, the bill introduced in the last Congress by Senator Lodge in the Senate and by Mr. Burton of Ohio in the House, which has received the approval of the commercial bodies interested in the reform. It provides for a complete reclassification of the consulates, with salaries running from $1,800 to $10,000 a year; for appointments entirely by classes and not by places, so that a consul may be transferred from one place to another within the class to which he belongs, and must take any station, pleasant or unpleasant, just as an Army or Navy officer must; for many classes and regular promotion, so that there shall be no stagnation; for a practical examination before appointment by an absolutely impartial board, composed of a consular officer, an official of the State Department, and the Civil Service Commissioners; for the selection of the appointee from those who have passed the examination; for a separation of the consulates in the Orient and semi-barbarous countries from the rest of the service, so that none but graduates in law shall hold consular courts; for an interchange of personnel between the State Department in Washington and the foreign service, so that experience in one may be made available for use in the other; for the occasional recall of a consul from his station and his detail for special duty in the United States, so that he may renew his acquaintance with commercial affairs at home, and not suffer expatriation; and for dismissal upon proved charges. These are the most important features of what may be termed the Chambers of Commerce Consular Bill, a measure which, if it were enacted into law, would in a short time place the foreign service upon a level with the best-conducted branches of the Government service in Washington.

OUR NEW HORIZON

THE ECONOMIC CAUSES THAT ARE COMPELLING EXPANSION—THE YET UNKNOWN RESULTS OF OUR INDUSTRIAL ADVANCE OVER EUROPE—OUR FUTURE GROWTH DEPENDENT UPON THE BROADENING OF EXCHANGE —CONSULS AS PROMOTERS OF NATIONAL INFLUENCE AND TRADE

BY

FREDERIC EMORY

CHIEF OF THE BUREAU OF FOREIGN COMMERCE, DEPARTMENT OF STATE

IN the light of recent developments "looking outward" to obtain full play for our expansive forces is now seen to have been, from the first, a foregone conclusion. With all their prescience and wisdom, the founders of the Republic, impressed by the vast extent of territory to the westward of the thirteen original States, could not foresee the time when it would no longer suffice to employ the energies of the people or to satisfy their ambition. The United States of a hundred years ago, from the contracted limits of the Atlantic seaboard, surveyed a horizon which seemed far beyond its possibilities of growth for an indefinite period, and it is not surprising that thoughtful minds of that day were so absorbed with the magnitude of the task of domestic development that their chief concern was to secure to the infant nation the utmost freedom from extraneous cares and the means of concentrating itself, without let or hindrance, upon problems of government, of industrial growth, of subjugation of vast tracts of wilderness. This problem, it was thought, could only be confused and rendered difficult of solution by more than the scantiest participation in the world's affairs. Hence the warnings against entangling alliances with other nations and the gradual development of the policy of isolation and abstention from any but formal relations with the Great Powers which became a settled principle of American statesmanship, and continued unimpaired, with only such exceptions as our material interests seemed to require, down to the time of the Spanish war.

THE EARLY COURSE OF OUR EXPANSION

It is true that very early in our history we were brought into close contact with France and Spain in rearranging and extending our national boundaries. Almost at the birth of the nation, and with vast unexplored possessions beyond the Alleghanies, we began to feel the stirring of territorial ambition, and within eight years after the date of Washington's farewell address the Louisiana purchase had more than doubled the land area of the United States. But in this and in all the subsequent steps of expansion, with the exception of the acquisition of Alaska, down to the annexation of the Hawaiian Islands, we took no leaps across the seas or into the territory of other nations. Our looking outward with covetous eyes was confined to regions contiguous to our own; we enlarged our boundaries only within the continental limits which nature seemed to have provided for our gradual and orderly growth. Throughout the whole course of this expansion we were animated by the general idea that we were sufficient to ourselves, that we need have no serious concern with what was happening elsewhere, and that, being independent of all fear, favor or affection on the part of other nations, we were best occupied in minding our own affairs.

A NEW ERA OF DEVELOPMENT

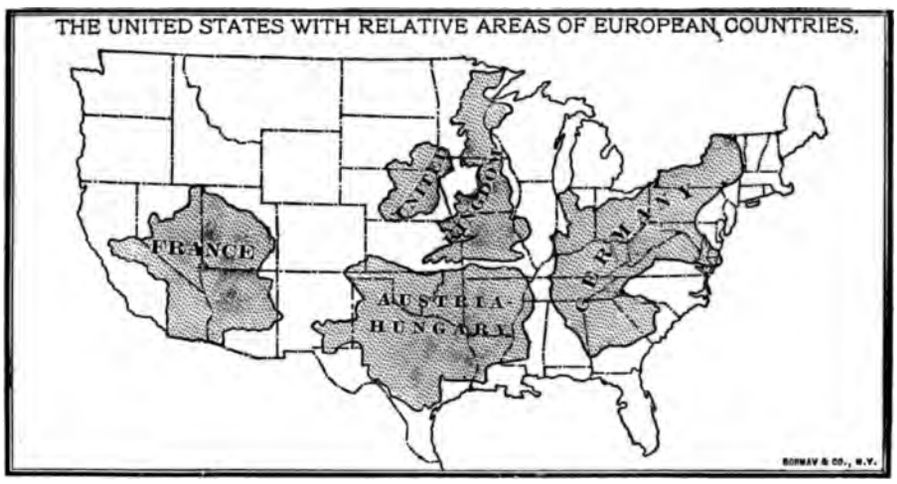
The war with Spain wrought a sudden change. When we decided to take the Philippines we realized that our traditional policy of seclusion was at an end. The moment we stepped into the arena of world politics, as the owner of distant islands in the Pacific, we entered upon a wholly new era of political development. We became conscious, all at once, of an immensely enlarged field of vision; of grave responsibilities we had not anticipated; of problems confronting us for which,

it seemed, our form of government, our institutions, our social economy, had made no provision.

The contrast between what we were before the war with Spain and what we became as the result of it illustrates the purely continental form of our expansion for more than a century, and the sudden transformation into a colonial power upon the conclusion of the Treaty of Paris, three years ago.

OUR PLACE AMONG THE GREAT POWERS

The significance of our changed relation to the world at large is seen by superimposing upon the area of the United States the areas of the leading industrial nations of Europe—Austria-Hungary, France, Germany and the United Kingdom, exclusive of the colonial possessions of the latter—and observing how



small a portion of the Union any one of them covers.

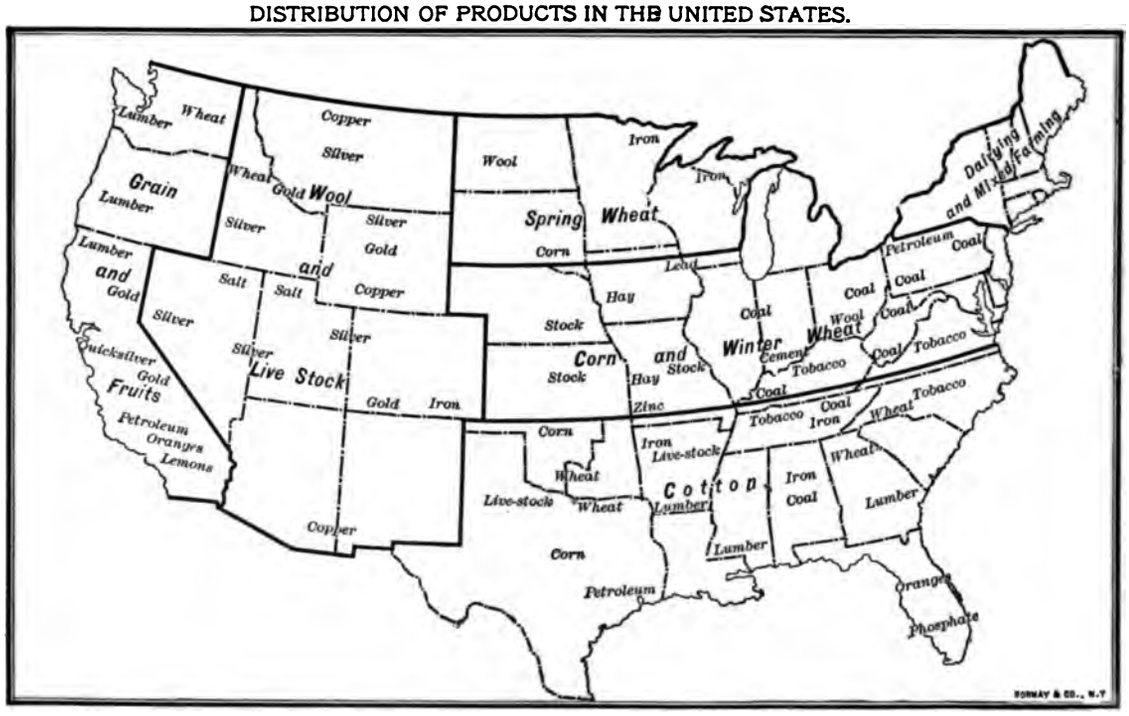
The mere preponderance of size might mean little, so far as international weight and influence are concerned, if it were not for the fact that our recent acquisitions of outlying dependencies happen to be such as compel us to assert ourselves as a world Power, and at the same time provide us with the means of consolidating our new and constantly enlarging interests in other lands. But a few years ago, the United States was confined to the North American continent; today, it has a great stake in the Pacific and holds the gateway to the Gulf of Mexico and the Caribbean Sea. The construction of an isthmian canal, connecting the Atlantic and the Pacific, which has long been advocated for purely economic reasons, takes on a new and vastly increased importance as the logical corollary of our enlarged sphere of action. Now that we have planted ourselves in the Gulf of Mexico and in the Pacific, it is obvious that the shortest means of communication between our possessions becomes a matter of political as well as of commercial gravity. And while our insular acquisitions may seem to have been largely fortuitous and unintentional, it is becoming more and more apparent that they fit in naturally with what is destined to be the future course of our expansion. Asia and South America are inevitably the goals to which our commercial activity will, sooner or later, tend, and the Pacific slope and the cotton States of the South are already fully awake to the importance to them of the proposed isthmian canal, and of Porto Rico, Hawaii and the Philippines as necessary way stations to vast undeveloped markets for their products.

With the exception of Russia, none of the European powers is so fortunate in its colonial acquisitions as ourselves from the point of view of subserving a solid, contributory growth. Like us, Russia has pushed forward her boundaries on natural lines, and presents to the world a domain made up of coterminous areas. The dependencies of France, of Great Britain, of Germany, are all widely detached from the parent power, and it is easily conceivable that, in some cases, they might become sources of weakness rather than of strength.

NATURAL ADVANTAGES OF THE UNITED STATES

In comparing the United States with the other Great Powers, we must also take into account the overwhelming superiority of our natural resources. There is no country in Europe which approaches us in variety or volume of products of the soil, the forest, the mine, and all the industrial nations are more or less dependent upon us for the raw material for their manufactures, as well as for food supplies. Nature is, in fact, most lavish with us, and the map presented herewith, on which are shown the staple products of the different sections of the Union, reveals the extraordinary range of our natural wealth, covering nearly everything that is necessary to industrial activity as well as to human sustenance in both the temperate and the tropic zones.

DISTRIBUTION OF PRODUCTS IN THE UNITED STATES.



ECONOMIC CAUSES OF THE NEW EXPANSION

Given these natural advantages, with a busy, restless, inventive people, and it was inevitable that, sooner or later, the time would come when we should cease to be satisfied with merely domestic interests and would begin to look abroad for a wider exercise of our energies. The time came even before the Spanish war. We had long since reached the limit of continental expansion, except at the cost of gratuitous aggression upon our neighbors, Canada and Mexico. Although we were far from having occupied all our territory, in the sense of reducing it to tillage, and still had plenty of elbow-room in the West, we were suffering from a sense of constraint, a vague feeling that we were not exerting ourselves to the full extent of our powers. For a long time we had been in the habit of regarding ourselves as a great people, but we felt that we were doing but little to impress this fact upon the rest of the world.

In the meantime we had unconsciously been equipping ourselves for the rôle we were destined to play. Our very absorption in the task of internal development, of the most effective utilization of our natural resources, of building up a vast fabric of industrial efficiency, was the best of all preparations for a triumphant entry upon the great world-stage of international competition. Economy of production as the result of cheap and abundant raw materials, the application of machinery and labor-saving tools to almost every form of mechanical effort, the invention of improved processes and methods of manufacture, and

above all the superior industry, ingenuity and adaptability of our artisans and operatives, were gradually brought to a point of perfection which has thus far defied all rivalry or imitation. Without knowing it, we were fashioning the master key that was to unlock for us the markets of the world and thus provide a new channel for the national instinct of expansion, the national dream of greatness to be seen and admired of all.

A FORCE THAT COULD NOT HAVE BEEN CONTROLLED

As has frequently been remarked, it was this latent force, already at the point of eruption, which gave such momentum and energy to the war with Spain and controlled the final settlement of the terms on which peace was made. We were not in need of more territory, but commercial expansion had become a matter of pressing urgency if we were to advance along the existing lines of our accelerated industrial development. In other words, we were producing more than we could market at home, and if we wished to keep our factories going and our workmen fully employed it was evident we must seek new outlets abroad. It was not mere greed of political aggrandizement that moved the great body of our people to accept and approve the territorial expansion resulting from the war with Spain, but the gradually widening perception of the fact that the results of the war were likely to contribute immensely to our commercial influence and prestige.

In espousing the cause of Cuba against Spain we were undoubtedly animated, to a very large extent, by indignation and sympathy with a people we believed to be cruelly oppressed, but underlying the popular sentiment which might have evaporated in time, with ameliorating changes in the Spanish policy, was the settled conviction that so long as Cuba remained a dependency of Spain our economic relations not only with that island but with the whole of the West Indies, and to a greater or less extent with all Latin America, would be impossible of adjustment on any safe or permanent basis. Cuba was in fact a stumbling block, a constant menace to the southward movement of our trade. To free her from the Spanish incubus was, therefore, a commercial necessity for us, and as we became more and more keenly alive to the importance of extending our foreign commerce, the impatience of our business interests at such obstruction was waxing so strong that, even had there been no justifying cause of an emotional kind, such as the alleged enormities of Spanish rule or the destruction of the *Maine*, we would doubtless have taken steps, in the end, to abate with the strong hand what was seen to be an economic nuisance.

POPULAR RECOGNITION OF NEW REQUIREMENTS

But important and far-reaching as were the consequences of the Spanish war, it was but an incident of a general movement of expansion which had its roots in the changed requirements of an industrial capacity swollen far beyond our domestic powers of consumption. It was seen to be necessary for us not only to find foreign purchasers for our goods, but to provide the means of making access to foreign markets easy, economical and safe. Hence the rapidly augmenting popular interest in projects which had languished for years, for building up our ocean marine, for cutting an isthmian canal, for establishing better banking facilities in foreign countries, for the improvement of the consular service in order to make it a more efficient instrument of trade, for the modification of our tariff relations with the view to enlargement and greater freedom of exchange. However widely men may differ as to details or the method in which any one of these objects is to be attained, there is practical unanimity in the opinion that our commercial expansion must go on; that the industrial supremacy which is now conceded to us by all the world must be maintained and strengthened by every means in our power; that there can be no turning back to the position of isolation and exclusiveness which, now that we are producing more than we can consume, would inevitably mean repletion, stagnation and, finally, decay. It is this feeling which has converted us from a quiet, self-centred people, absorbed with our affairs, into a strenuous force among the nations — not necessarily aggressive or militant, but determined to avail ourselves to the full of our new and constantly widening opportunities, and to safeguard the novel interests which are springing up in the spread of American commerce throughout the world.

INDUSTRIAL COMPETITION WITH EUROPE

THE WORLD'S WORK from time to time has fully set forth the remarkable progress of American manufactures, even in markets least favorable to them, such as the industrial centres of Europe producing similar lines of goods, and has published a mass of testimony from foreign observers, as well as from our own trade figures and the reports of our diplomatic and consular officers, as to our ability to meet and overcome the most vigorous competition. The situation, however, is constantly changing and presents some new and important feature of interest every month. Of late there have been symptoms of disturbance of our onward movement which have caused more or less anxiety, but the possible consequences are still unrealized, and for the present we are continuing to forge ahead. The fact that during the past year our exports of manufactures have fallen off is found on analysis to be significant only of such fluctuations as we might naturally expect, and is offset by testimony from our consuls as to the uninterrupted growth in popularity of American goods.

AMERICAN SUPREMACY CONCEDED

Even in Austria-Hungary, where hostility to American products is most pronounced, the imports from the United States, according to Consul-General Hurst of Vienna,* are increasing rapidly, although American exporters have not until recently given general attention to that part of Europe "which is considerably removed from ports in closest touch with transatlantic commerce." So formidable is the growth of American imports, in fact, that "Austrian manufacturers and agriculturists are making an organized effort to stem the inflow." At a recent conference in Vienna to take measures against American competition, adds Mr. Hurst, "it was openly acknowledged that the commercial policy of the present time is dictated and controlled by the United States. . . . Instances of the gigantic strides of our American manufacturing industries are cited to show our capability to forge ahead of all competitors in many fields."

In a report upon the commerce and industries of Germany in 1900,† Consul-General Mason of Berlin says the United States again heads the list of countries selling to that country, with a total of nearly $243,000,000, or 16.9 per cent. of the entire bulk of German imports, although it should be noted that this covers the values of all American products landed on German soil, "a large percentage of which simply pass through . . . *en route* to Russia, Austria-Hungary, Switzerland and Scandinavia." It may be expected that the returns for 1901 will show a falling off in German imports, owing to the industrial depression which has seriously impaired the purchasing power of the Empire during the past six or eight months. But in Germany, as in Austria-Hungary, our goods continue, relatively speaking, to hold their own, and the "overshadowing competition of the United States" is regarded by German economists as of momentous importance to the future of German industry and commerce. "It is recognized by intelligent Germans," adds Mr. Mason, "that in future industrial and trade competitions, that fine composite product of American racial qualities, institutions and methods, the workingman who thinks, will, in combination with our unequaled resources, turn the scale in favor of the United States."

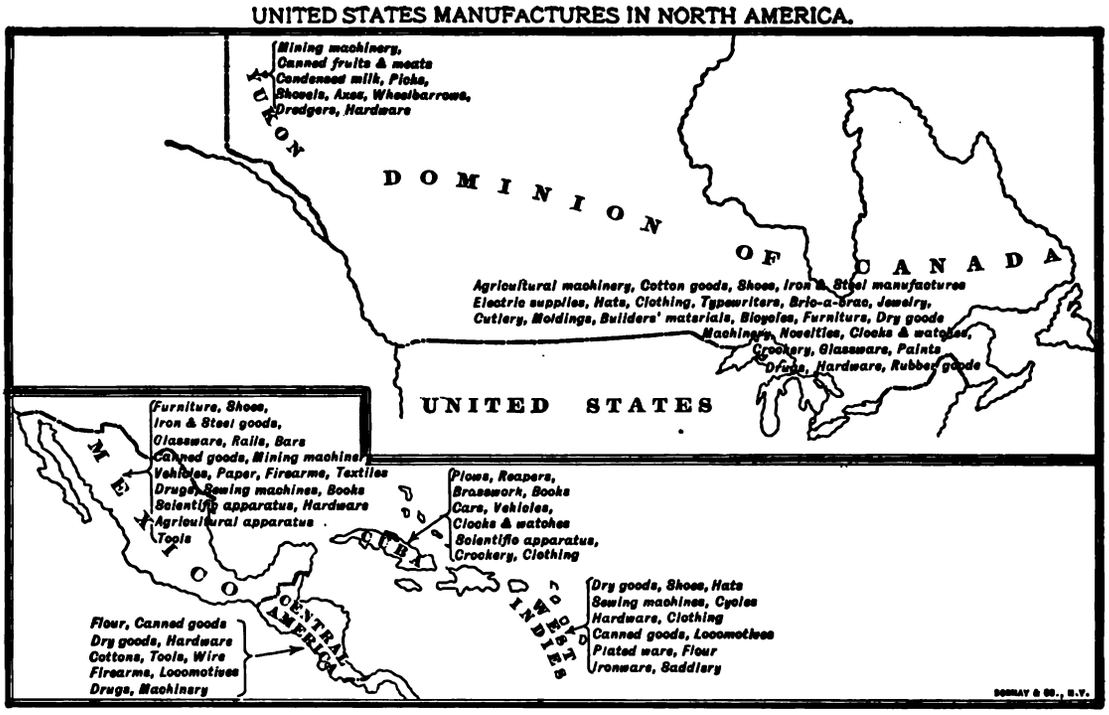
UNIQUE POSITION IN INTERNATIONAL EXCHANGE

The same concern is felt in France, in Belgium, in Switzerland, in Great Britain—in other words, in all of the highly developed manufacturing countries of Europe, and it is a most significant fact that, even in specialties which were once thought to be exclusively their own, the United States is becoming a more and more formidable competitor. Who would have imagined, a decade ago, that we should be so successful in the manufacture of silk that we would not merely cease buying silks from France, with the exception of certain kinds of highly finished goods, but would be exporting silks to that country? Yet this is what has happened. So of tin plate in Wales. At one time it was considered to be doubtful whether we could manufacture tin plate at all; there were some who held the

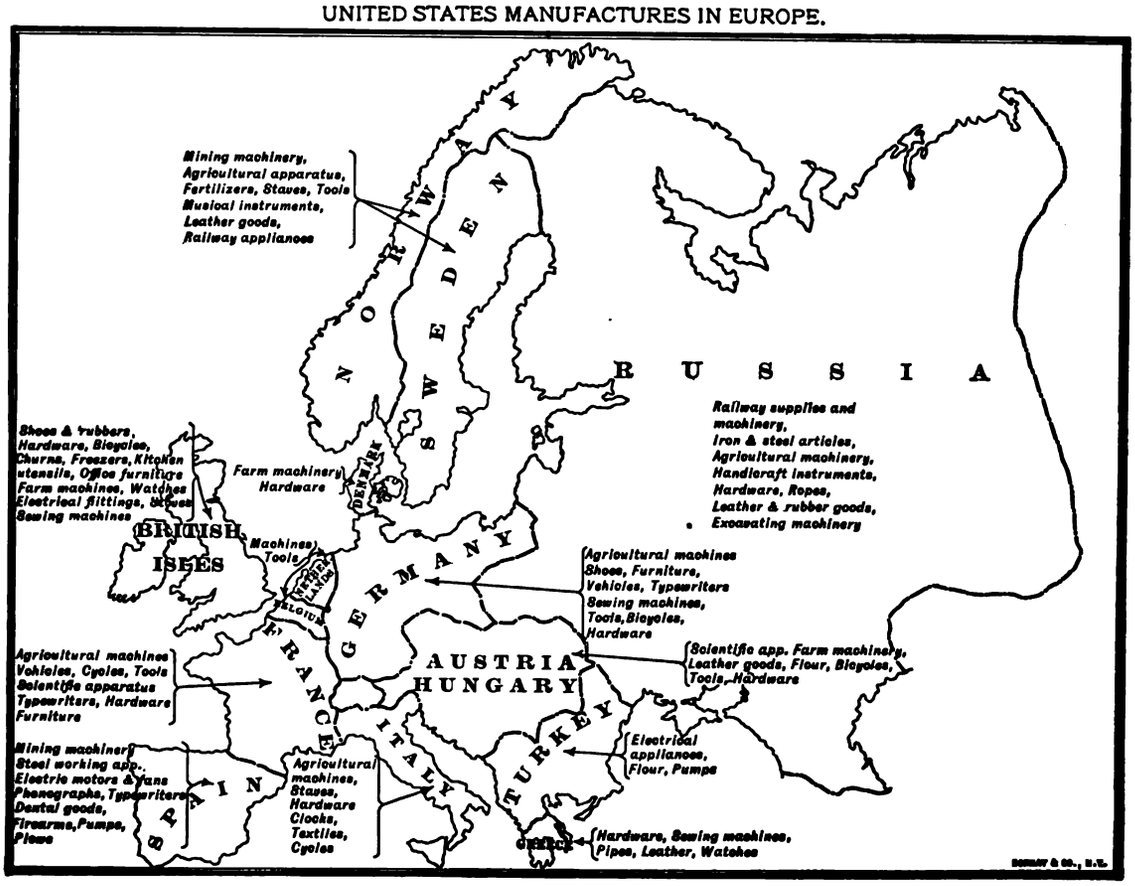
*Printed in *Advance Sheets of Consular Reports*, No. 1193, November 19, 1901.

†Printed in *Advance Sheets of Consular Reports*, No. 1185, November 9, 1901.

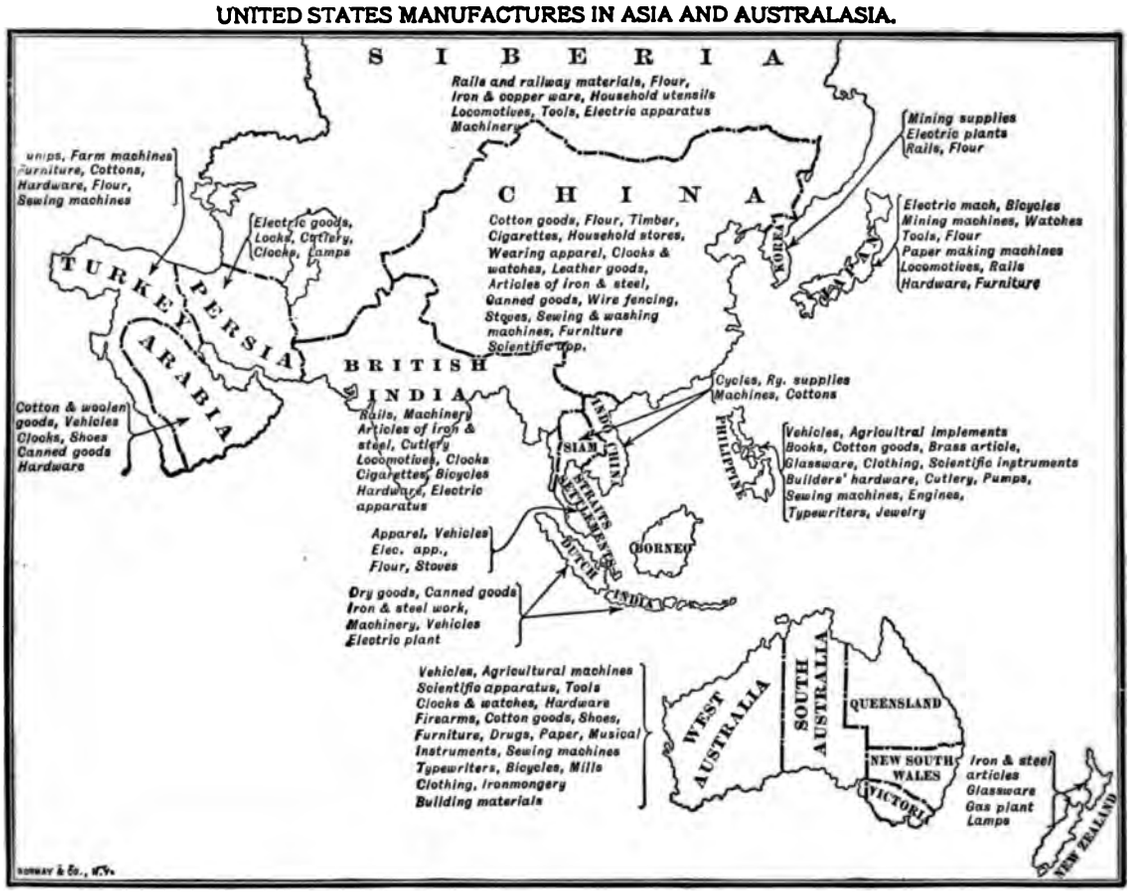
UNITED STATES MANUFACTURES IN NORTH AMERICA.



UNITED STATES MANUFACTURES IN EUROPE.



UNITED STATES MANUFACTURES IN ASIA AND AUSTRALASIA.



UNITED STATES MANUFACTURES IN AFRICA

idea to be preposterous, and it was asserted that the Welsh must always hold the American trade. But in fact the position has been reversed. We manufacture more tin plate than we need, and the Welsh have recently imported tin bars from us. Our predominance in iron and steel, which once would have seemed a mere chimera, is now a twice-told tale, and the steam coals of Wales, so long without a rival, are finding in our coals their only formidable competitor. It may be remarked that the nation which supplies the world with coal and iron—the indispensable bases of all modern industry—beside producing enough for its own enormous needs, and in addition provides for export a vast bulk of food supplies and constantly increasing manufactures, occupies a position unique in the history of international exchange.

ANOMALIES OF AMERICAN COMPETITION

If we survey the field of American industry, we find that there are surprisingly few of

the articles which used to be obtained exclusively abroad that are not now produced in the United States. We are actually told that the woolen as well as the silk industry of France and the hosiery industry of Germany are suffering severely from our competition, and that the Bohemian glass industry is feeling the effect of the increase of glass manufacture in the United States. It is even feared that our glass will flood the European markets. Our cottons are steadily gaining in taste and finish, and are now sold in England in competition with the Manchester product.

Says the *Leipziger Tageblatt* of April 10: "Even in fancy articles, in which the European market has set the styles for the entire world, the American manufacturers are beginning to compete with the European. British calico prints are already receiving competition from America. We hear that travelers of a well-known American house have offered American cotton stuffs in England with much success, and the London authorities declare them to be tasteful and worth their price." A New York company manufacturing cotton stuffs intends to found a Paris house which shall introduce its fancy woven stuffs for women's dresses and trimmed women's hats are being exported from the United States to Europe. Imagine Americans purveying dress-goods and millinery to the Parisians! "The reversible cloths which are made in the United States," said Consul Sawter of Glauchau, in a report sent in 1900, "are now the style in high-priced goods in the German capital."

It was noted months ago in THE WORLD'S WORK that we were sending cutlery to Sheffield, iron to Birmingham, beer to Germany. In agriculture, as well as in manufactures, we are constantly widening the sphere of our production. The orange and lemon growers of Southern Europe are feeling the pinch of California's competition. "It is ridiculous," exclaims a Spanish newspaper,* "to think that fruits and vegetables raised on the slopes of the distant Pacific should compete at the very doors of Spain with those produced in this country. . . . Shall we live to see American oranges on the Valencia market itself?" We are producing our own raisins, our prunes, our wines, our olive oil, and are sending them abroad. California prunes now compete in Europe with Bosnian prunes.

* See *Advance Sheets of Consular Reports*, No. 1043.

CONSULS AS PROMOTERS OF TRADE

Undoubtedly, much of our progress in recent years is due to the keen business instinct and activity of our consular officers at most of the industrial centres of Europe. Whatever the deficiencies of our consular service, it can no longer be denied that it is of great and constantly increasing utility to our industry and commerce, and its work has become the object of envy and emulation on the part of

UNITED STATES MANUFACTURES IN SOUTH AMERICA

Governments whose consular establishments were at one time considered to be far superior. In reporting upon new inventions and manufacturing processes, especially, the consuls have supplied a great mass of valuable data to our developing industries, and their zeal and ingenuity in obtaining such information which, in many instances, was jealously guarded by the European manufacturers, have been so keen, so searching, so indefatigable, as to be a matter of bitter complaint on the part of foreign industrial interests.

If there is an opportunity for the introduction of American goods, or an obstacle to be overcome, the consuls, as a rule, may be trusted to report the fact, and the information is immediately printed by the Department of State and given to the public. Notwithstanding the serious drawbacks of political appointments and insecurity of tenure, the service shows a very general and steady improvement in its commercial work, and it seems capable of being made an unapproachable, as it is already conceded by the best foreign opinion, to be an unequaled instrument of trade. At most of the great commercial and manufacturing centres of Europe, our consular representatives fully justify the encomiums passed upon them by a German economist, as "vigilant sentinels, who spy out every trade opening or advantage and promptly report upon it."

AWAKENING OF THE NATION TO ITS POWER

Coincidently with the progress of our goods in the world's markets and the increased activity of the consular officers in efforts to facilitate and extend this movement, there has naturally been a general awakening, not only on the part of the manufacturing and exporting interests more immediately concerned, but among our educators, publicists, politicians, to the growing magnitude of the issues involved and the importance of devising the best means of utilizing the golden opportunities which seem to offer themselves more largely to us than to any other people in the international struggle for trade. During the past two or three years many books, pamphlets and magazine articles have been written on different phases of the subject. It is a frequent theme of public addresses and the basis of special courses at a number of our universities and colleges. Even the ordinary high schools are rapidly adopting the study of commercial geography as a necessary feature of preparation for college or for business life. Export associations and commercial museums have been organized at various points, and it may be said that there is hardly any question now before the American people which appeals so strongly to their patriotism, their pride in their country, their national ambition, as well as to their money-making instinct. Moreover, it is not too much to claim that the commercial expansion of the United States, if it continue unchecked, may easily develop into a vast ethical force. Already we see in the workings of our industries here at home many indications of moral and intellectual results which we are apt to pass over too lightly because of their familiarity. We have grown so used to them that they impress us only when we come to contrast them with conditions in other countries. In a general way we fully realize that we are an exceptionally prosperous and happy people; but it is important, now that we have entered upon a new and enlarged sphere of action, to ascertain if we can the causes of our fortunate condition and whether they are likely to endure.

THE FUTURE OF EXPANSION

It may be assumed that our continued growth on present lines depends upon the steady progress of commercial expansion. The question as to how increasing trade may best be secured and maintained is one as to which our publicists and politicians differ widely. Nearly all of them concur substantially in the view expressed by President McKinley at Buffalo, that "we must not repose in fancied security that we can forever sell everything and buy little or nothing," and that "a system which provides a mutual exchange of commodities is manifestly essential to the continued and healthful growth of our export trade"; but there are powerful interests which will antagonize many of the tariff concessions that such a policy implies. If we make no concessions we may ultimately find ourselves face to face with impassable barriers raised by European nations against our manufactured goods.

THREATENED DIVERSION OF AMERICAN INDUSTRIES

There is another danger which may be imminent. Again and again our business men have shown a remarkable capacity for settling knotty problems independently of legislation, and our manufacturers have recently given a significant and disturbing evidence of this faculty by seeking a short cut to tariff favors in Europe without waiting for action by Congress. According to Mr. Robert P. Porter, formerly Director of the Census and a well-known writer on economic subjects, American industries are establishing plants in England in order to obtain the benefit of minimum

tariff rates from European countries which, in the absence of reciprocal agreements, may continue to enforce the maximum rates against the United States, if they do not make them still higher. The same thing is being done in Germany and Belgium by some of our capitalists. Such a movement, if it became general among our exporting manufacturers, would obviously be most injurious to American labor in transferring production for export from our home factories to those established in Europe, and to our export trade generally and the many important interests it subserves. Our future expansion, therefore, seems to depend upon an early adjustment of tariff differences with other countries which will remove the incentive to our manufacturers to go abroad.

DANGER OF PRESSING EUROPE TOO HARD

There are other serious disadvantages we might easily suffer from if nothing is done to bring about the reduction of the high customs duties which many countries now enforce against our goods, even in the absence of expressly retaliatory action by those nations which are feeling most acutely the pinch of American competition. Europe has been taking our tools, our machinery, our textiles and other goods in increasing quantities because they have been found to be better and relatively cheaper than their own, even with the tariff duty added; but European purchases from us are obviously dependent upon the ability to pay, and in periods of depression, such as that which has overtaken Germany, the consumer would be forced to economize and content himself with an inferior article at the lowest price. In that event the European manufacturer might be compelled to dispose of accumulated stocks at a sacrifice that would make competition difficult for us if we continued to be handicapped by discriminating duties.

OUR SAFETY DEPENDENT UPON OURSELVES

The perils which are thus seen to confront our future expansion are neither fanciful nor speculative. At any moment they may become urgent. Great as we are, with unequaled capabilities as an exporting nation, we are not great enough to set aside the natural laws of trade and make the whole world a passive instrument of our will. "We cannot hope," said Senator Lodge, in his address before the Middlesex Club in Boston, early in November, "to shut our own markets absolutely to the world and then sell to all mankind. It might be an ideal situation, but in the long run it is impracticable as well as dangerous." "The period of exclusiveness," declared President McKinley, in what has been justly termed his political testament to the American people, "is past. The expansion of our trade and commerce is the pressing problem. Commercial wars are unprofitable. A policy of good will and friendly trade relations will prevent reprisals."

"AMERICAN MACHINERY FOREVER"—IN SPAIN

BY

EDWARD LOWRY

SPAIN, heretofore the most backward of the nations of Europe, and one of the last to adopt progressive methods, is being built up and modernized by American enterprise. The work is gaining in volume with astonishing rapidity. A striking illustration of the growing popularity of American machinery in Spain is shown by the accompanying cut.

J. F. Villalta, of Barcelona, is at the head of the largest concern of its kind in Spain and is one of the best known Spanish merchants. He would hardly dare use on all of his letter-heads the imprint of an American eagle surmounting the globe, placed above the coats-of-arms of the United States and Spain, the whole topping the legend, "American Machinery Forever," unless he were sure of

the temper of his customers. The letter-head from which the cut was made had stamped on it in red ink this warning, "Please duly post-stamp all your letters and papers." The story of the necessity that prompted this warning is not creditable to the American business men who are seeking new foreign markets for their wares.

The demand for American manufactures is insistent and covers a broad variety of articles, notwithstanding the fact that the greater number of orders placed have so far been in the nature of experiments. In practically every instance, however, these experimental orders have been followed by substantial shipments and Spain is rapidly becoming one of the most enticing markets for American goods. The United States, supposed to have ruined Spain by despoiling her of Cuba, Porto Rico and the Philippines, is now doing more than any other one agency in renewing what was considered an effete and decadent nation.

A significant instance of the attitude of the Spanish, and especially of the Spanish Government, toward the "American invasion" may be found in the great arsenal at Trubia. It is at this arsenal that the heaviest ordnance used by the Spanish army and navy is turned out. Since the recent war the arsenal has been equipped with engine lathes of American manufacture for turning out great guns. These lathes were of such length and so heavy and unwieldy that it was with the greatest difficulty they were put on board the steamers for shipment. The arsenal also has now electric motors, an electric-lighting plant, and other electric apparatus made by an American electric company used in driving the machine tools of American manufacture. The arsenal is also fitted up with an air compressing plant for driving pneumatic tools, all of American manufacture. Orders for these improvements were placed after the war by the Spanish Government and came directly to the United States from the Spanish authorities.

Spain has placed contracts in this country for more rolling stock than any other country in Europe. Not only is she using American railway cars, trucks and locomotives, but electric traction and tramway systems are being installed. The demand has developed since the war.

About eleven years ago a well-known locomotive works built two locomotives for a projected railroad in Spain, but the road fell into difficulties and was abandoned. When the two countries took up arms against each other trade did not entirely cease. For in April, 1898, at the outbreak of the war, this same company received a cable order for six consolidation locomotives for the Bilbao-Santander Railway, one of the largest mineral roads in the north of Spain. These locomotives were built while hostilities were in progress and were shipped in July when a movement directed against the Spanish coast was contemplated by our Government. Not only were they delivered safely and in good order, but an American engineer was sent out to Bilbao to erect them. A subsequent order for eight locomotives, duplicates of the first ones, was placed by the same road.

These engines attracted such favorable attention that other companies operating railroads or ore properties in the north of Spain placed orders with the same American company, so that at the present time thirty or more locomotives of the same type are being operated in Spain.

The Bilbao-Santander Railway has also in operation more than 150 American freight cars of various types and capacities. These

were the first cars used in Europe fitted with American cast-iron chilled wheels and axles. The same road has in operation about thirty American passenger cars, built like the cars used in the United States. Most of these contracts have been awarded to American concerns over European competitors.

The Compania del Norte, an important road, forms the connecting link on Spanish territory between Madrid and Paris. This road, just previous to the opening of the Paris Exhibition of 1900 placed a single order with an American car-building firm for 600 freight cars. Price and the ability to furnish the cars promptly were the main considerations that brought the order to the United States.

Two important mining roads in the south of Spain have in operation about 100 freight and ore cars bought in this country. It is a noteworthy fact that on the most important as well as the smaller roads in Spain, when old stock is discarded, American cars and trucks are purchased. This is also true of steel rails. The Carnegie works now have in hand an order for 2,000 tons for immediate shipment.

Another feature of our export trade with Spain that has a sentimental and picturesque value, is the order recently placed in this country for a dining car, a parlor car and a sleeping car for the private train of King Alfonso. They are to be luxuriously furnished and decorated for the King's use.

In the matter of electric traction and tramway equipment less progress has been made. But American street railway equipment is rapidly gaining favor. In Barcelona, for example, where the electric traction system is controlled by Belgian capital, the poles, the wires, the trucks and the motor equipments were all furnished by American firms. The cars were made in England. So late as four years ago there was not an electric traction system in Spain. At the present time at least ten are either in operation or are projected. Street cars running on American trucks and having American motor equipments are now in operation in Bilbao, San Sebastian, Madrid, Passages and Barcelona. Shortly after war was declared in April, 1898, a Philadelphia firm shipped on one order more than 200 electric motor trucks to Madrid and Barcelona. While there is no street railway system in Spain completely equipped with American rolling stock, the same cannot be said of her close ally and neighbor, Portugal. The Philadelphia concern just referred to has recently sent to Lisbon 120 complete open cars with trucks. These were typical American cars, and the machinery for the entire system, costing several millions of dollars, was supplied by American manufacturers.

The average American thinks of shipping tobacco to Spain as a flagrant case of carrying coals to Newcastle. This view is not borne out by facts. Francisco Carmona, of Madrid, one of the high officials of the Spanish tobacco monopoly, has visited this country during the past year. He bought more than $2,000,000 worth of Kentucky and Virginia tobacco to be shipped to Spain. Quite recently 5,000 tons of the tobacco bought by Señor Carmona went out in one shipment. The steamer that carried this shipment from New York had on board 11,000 tons of American freight for Spain valued at over $300,000. This was the largest single shipment ever made from this country to Spain. For business reasons every possible effort was made to keep Señor Carmona's identity unknown, and the fact that he was here was kept carefully from the newspapers.

A market has developed since the war for leather goods, staves, stoves, paraffine, typewriters (for use in the Government offices in Madrid and elsewhere), skin cases for sausages and a variety of other articles.

It is estimated that fully one-half the goods exported from this country to Spain do not show on the export statistics compiled at Washington. The reason is simple. Because of the inadequate freight facilities for shipping directly and the higher tariff imposed on American manufactures in Spain, American manufacturers ship their goods via England. Coming from England the shipments pass through the custom house as English goods, and pay a lower duty than they otherwise would. Many orders from Spain come to this country through English agents. Several American houses whose goods have a wide popularity in Spain are absolutely ignorant of the fact that any of their output goes to that country. This is because of the English or French middleman.

As an example may be quoted the case of a prominent Spanish merchant who came to

New York in September of this year to secure if possible the agency of an American lock company whose locks are exceedingly popular in Spain. Shortly after his arrival he called on the president of the company and stated his business. The American, while perfectly willing to have an agency established, told his visitor that he did not know that the locks had ever been sold in Spain. He was amazed to learn that they had been sold in large quantities since the war. Spanish merchants had been buying them through English houses.

The varied noises of American foundries, machine-shops and factories are echoing about the castles in Spain with all the insistency of the guns off Santiago. It is the peaceable invasion of Western activity.

THE NEW FARMING AND A NEW LIFE

HIGHLY SCIENTIFIC AGRICULTURE MADE PROFITABLE ON OLD LAND — A SOCIAL DEMONSTRATION OF THE ATTRACTIVENESS OF COUNTRY LIFE — A COMMUNITY OF PROSPEROUS AND CONTENTED WORKERS

BY

MARY C. BLOSSOM

Illustrated from photographs by Henry Troth

TWENTY-SEVEN miles from New York City, between the Pocantico Valley and the Hudson River, and overlooking the Hudson, lies Briarcliff Manor, an estate four miles in length and three in width. About eleven years ago Mr. Walter W. Law, a successful man-of-affairs, retired from business while yet in the prime of life and established upon this site for his pleasure and recreation a small dairy farm, which has since assumed very large proportions. He has proved two things of enormous value—one is a purely commercial fact—that the very best things in dairy products and floriculture command a profit-yielding price; and that the social results of farm-life, such as poets and philosophers have celebrated, can be actually achieved, and that, too, with scientific and labor-saving improvements that poets and philosophers never dreamed of.

It is much to prove that farming can be made to pay on land in the Eastern States that has no particular advantages except proximity to a market. It is even more to prove that farm-life near a great city can be made a happy and invigorating social life for everybody concerned with it, from the laborers to the owner. Mr. Law, therefore, has earned the double distinction of being a successful farmer and a practical social reformer—a philanthropist in the best sense of the word.

While the universities and the technical schools are teaching the possibilities of farming conducted on scientific principles, Mr. Law is successfully carrying his scientific ideas and humane principles (which in the last analysis are one) into practical operation. The care of the farm at first was chiefly recreative in object; but, having applied business principles to the conduct of it, he found that the place was yielding him a profit. More acres were added from time to time, and the farm became a source of revenue instead of an expensive recreation.

His first aim has been to develop the earning power of his own land, and in so doing he has given an object lesson to others. His estate has grown to about 5,500 acres, and upon it nearly all the industries grouped under the name of "small-farming" and dairy farming are now in successful operation. He has shown that labor and land may be made productive and do their share for the common good, on a business basis which is within the reach of the small farmer. He applied the same sound business principles by which he made his fortune. With this lesson once made plain, he feels sure that the result will be to relieve the congestion in great cities,

and to lighten the burden of the agricultural laborer. The principles considered vital at Briarcliff are essential to success everywhere, and the methods adopted are precisely the methods that the small farmer must adopt if he expects to get ahead. For instance, the smallest and poorest farmer can give his attention to the treatment of his cows, and to the cleanliness of his stables, and in short can do as Mr. Law does, "make the best of everything on the place," to his own advantage.

To spread abroad the teachings of his experiment Mr. Law lent his aid to the establishment of a School of Practical Agriculture and Horticulture. He leased to the school 66 acres of land worth $1,000 an acre, for twenty years at a dollar a year; he gave the trustees $30,000 to build a dormitory, and he assured them $3,000 a year for running expenses until the school should have reached a paying basis. With this foundation and an additional $30,000 subscribed by the trustees, who are men of generous ideas, the school was opened last year. Besides making these gifts, Briarcliff Manor, with its extensive grounds laid out by Mr. Olmsted, the landscape gardener, was opened to the students as a field for study and instruction under the guidance of experienced teachers. The object of the school is the practical training of men and women in all branches that will make them proficient in the management of farms, estates, greenhouses and gardens, and to give them a thorough knowledge of the science of the soil. The aim is to raise the standard of agricultural methods, and to demonstrate through practical instruction that higher value may be obtained from land under intelligent management; to overcome the difficulties, and to establish the value of the small farm under intensive culture, and to develop the special market for its finer productions. The courses of study include horticulture, botany, chemistry, geology, economic entomology, building construction, stock husbandry, and bookkeeping. The practical work includes the care of orchard trees and bush fruits, the culture of vegetables and fruits under glass, the making of jellies and jams, market-gardening, the tillage of soils, the use of fertilizers, hybridization and propagation of flowers, and the methods of harvesting and marketing crops. Instruction is given also in dairying, poultry and bee-keeping, table and house decoration. The New York Botanical Garden near Briarcliff gives the students the privilege of its lectures, museums and conservatories. It is noteworthy that among the students in this democratic school are not only young men of all social grades, but young women as well.

Proximity to a great city of 3,000,000 consumers affords an exceptional opportunity for students to learn what is of the greatest importance and what is so imperfectly understood by the great mass of producers—the study of markets and marketing, the methods of packing, and the selling of products in the great wholesale and in the finer retail channels of trade. This last is of the very greatest practical importance. Mr. Law is a great merchant as well as a great farmer. One in fact makes the other necessary. His dairy products are delivered from his own wagons by his own men to the houses of the consumers in New York and in several suburban cities. In this way the same scientific care and handling of the products is ensured after they leave the farm as before. It is this certainty of cleanliness, purity, and freshness that constitutes a large part of the value of these products, and for this the consumer is willing to pay. The distribution is as much a matter of science as the production.

The distribution of these dairy products extends also over wider areas. They were sent to the Paris Exposition where they received prizes; and a consignment of butter from the farm is regularly made to one American household in China.

The same thorough business organization is maintained that is necessary in any other successful undertaking. When Mr. Law goes to his office every morning he finds a specific report of every pound or quart of things sold the day before, of the yield of every cow and of every greenhouse, of the condition of every herd, of the birth of every calf and of the blooming of every row of American beauty roses.

Mr. George T. Powell, the director of the school, is making a very exhaustive study of cold storage one of the great features of instruction, and there is probably no other place where the subject can be studied so extensively. Food preservation by means of refrigeration and cold storage is to be carefully considered, and it is the object of the

school to turn out fully educated experts, who will understand the subject in all its branches. A cold storage plant complete in its outfit, with properly insulated cold store-rooms, will shortly be erected, in which a careful study will be made of temperature effects on the articles stored. In connection with this department a school of architecture, as applied to cold storage construction, will be established. Under the direction and care of cold storage experts, who will deliver lectures, the different standard makes of refrigerating machines and plants, including all the various insulating materials used in different parts of the world, will be brought before the students.

From the beginning the management of Briarcliff Farms saw that in order to produce the best and purest milk it was necessary to begin with the pasturage. Year after year the fields have been ploughed and cultivated, turned over, drained and manured; suitable crops have been put in, the best grass has been sown, until the richest hay and pasture have been obtained. Looking from a window in the business office across a beautiful valley, one may see in one field about twenty acres of reclaimed land. Four years ago this ground was a swamp—last year it produced forty-five bushels of wheat to the acre. It is planted in hay for 1901. Practically all the food used is raised upon the place.

As to the animals themselves, there are few now left on the farms that were not raised there. The uniform rule has been to think more of the health of the herd than of the life of any individual animal. The herd now consists of 1030 animals, about one-third registered stock, and two-thirds "graders" of the finest sort; and with food raised mostly on the farms, fresh spring water, and the healthiest of barns, the results are most satisfactory. About 4500 quarts of milk per day is the supply, and it takes about eleven quarts of milk to make one quart of cream; but a correspondingly high price is received for it. The barns are practical, scrupulously clean and well-ventilated. The most approved barn has room for 102 animals. It has upper windows with glass panes which can be pushed outward at an angle that permits them to be opened even in snowy weather; there is also ventilation by means of an air-shaft in the centre of the building, and there is a small square ventilator behind each animal as it stands in its stall. The floor is of cement with trenches 16 inches wide and 5 inches deep. Every stall is supplied with an automatic watering tank, and automatic chain stanchions are used, by which in case of fire all animals can be released simultaneously. The animal is free to move her head in almost any direction, and to reach her own side with her tongue. A cake of salt is fastened to the side of the stall in a tin box. The partitions between the stalls are raised an inch or more from the floor, so that it is possible to sweep under them, and not a particle of dust is allowed to collect there. The rule of Briarcliff is the rule of a happy family, and that there is no success like using the golden rule in dealing with dogs and cats and cows and all God's creatures. A prize is given at Christmas, among others, to the man "who has been most gentle and free from shouting in dealing with the cows." Mr. Law plainly says, "Cruelty to a cow is the same as cruelty to me, and shall never be permitted on this farm."

The greatest care is exercised that no diseased animal finds its way into the herd. Twice a year Dr. Leonard Pearson, professor of veterinary science at the University of Pennsylvania, tests the herd for tuberculosis. Bulls and cows are turned out every day in winter from early morning until 3 in the afternoon, when they are stabled until the following morning. The cows are fed, sponged, combed, and milked regularly twice a day at 3 a. m. and 3 p. m., and the printed regulations which have to be vigorously carried out by the milkers may be seen in every stable. Every man has charge of about twenty-one cows, and before milking he must put on a clean white uniform and cap, and wash the udders of the animals carefully. Then he goes to the washroom which is in every barn and thoroughly cleanses his hands. With a covered milk pail in hand, having a fine wire strainer at one end, he discards the first milk that comes, and then he allows the remainder to pass through the strainer into the pail. Before milking another cow he is required to wash his hands again. Each milker records the daily milk flow of each cow on blanks which are placed on the stall above the animal. The business manager can tell at any time just what each animal in the herd is doing.

An individual test of the milk of each cow

THE COWS FEEDING ON THEIR WAY FROM PASTURE TO BARN

THE COWS IN PASTURE

Golf links in the background and the club-house to the left

is made four times a year. The law requires three or three and a half per cent. of fat; Briarcliff milk must contain over five per cent. of fat, or it is not offered for sale. A well-equipped laboratory under the superintendence of a competent chemist is situated but a few steps from the dairy. The milk is regularly analyzed, and the bacteria present are frequently below a thousand to the cubic inch. In Europe three or four million bacteria to the cubic inch are regularly found in much of the milk offered for consumption, while most of the milk sold in our large cities contains hundreds of thousands to the cubic inch.

THE COWS CHANGING PASTURE

After leaving the barns the milk is kept wholesome by a system of safeguards in the dairy-house; so also while the milk is in transit from the farms to the consumer. Every attendant at the dairy has his work confined to that place, and is not allowed to go near the barns. They also, like the milkers, wear white duck suits. Immediately after the milk is brought to the dairy it is put into a large sterilized tank, whence it is forced by compressed air through sterilized pipes to the second floor, where it is cooled and bottled. It is strained five times before bottling. Yet within five minutes after reaching the dairy a can of milk has been put into sterilized bottles. Every utensil in the building which in any way comes in contact with the milk or with the attendants is regularly sterilized by live steam, and the entire building is as free of bacteria as human ingenuity can make it. In the rooms of the dairy, which have white-tiled walls and floors, the wall meets the floor with a concave strip of tiling running round it, so

A VIEW FROM HOTEL HILL

Farm school in distance

THE STONE BRIDGE BELOW THE HOTEL

that no particles of dust can lodge as they might if the floor and wall joined squarely.

The first three years of the life of a cow on the farms are somewhat different from those of an ordinary cow. She begins life as a new-born calf at a barn known as Station A in the journey which all cows raised on the premises have to take before they reach the home barns and take their places as grown cows. Mr. Law believes that calves need their mother's care as a fitting introduction to life, as other youngsters do, so the little thing is left with the cow for one month at Station A or, weather permitting, in the adjoining fields. At the end of the month it is sent to Station B, where it joins a herd of calves that are fed on full milk from the pail—not skimmed milk, as is the usual custom. Mr. Law says, in answer to those who demur, "I'm not wasting that milk, I'm investing it." After remaining at Station B and in the surrounding fields another month, the youngster moves on to Station C, where it lives for four months, fed on skimmed milk with crushed feed or any wholesome vegetable it will eat. Six months are spent at Station D, on one of the highest hills in Westchester County. A year is allowed for Stations E and F, then the calf travels on to Station G, about three miles from the home barns, where it stays for ten months. At the age of two years and ten months, oftener three years, the young cow has a calf, and if the calf is kept both cow and calf go back to Station A for one month, after which the mother takes her place as a milker in the herd. Mr. Law believes that a cow is at her best only after being allowed to mature in this natural and wholesome way. Each milch cow in the herd receives seven pounds of grain daily. The ration is composed of fifty per cent. bran, twenty-five per cent. corn meal, twenty-five per cent. crushed oats, besides two pounds of oil meal and all the hay she will eat. The herdsman at Briarcliff says that a cow has a commercial value for about nine years, that is from the age of three until she is twelve or thirteen.

The diversifying of Briarcliff industries has been as rapid as was consistent with wisdom, and some of the land has been fitted by fer-

tilizing and rotation of grains, for the raising of fine vegetables. There are, for instance, seven acres planted in asparagus.

The poultry department is very interesting. There are thirty-one poultry houses distributed over the estate, each 18 x 100 feet, with an alley running through the middle. During January there was one incubator brood of a thousand chickens, and there are about four thousand chickens and ducks in all on the farm. The poultry expert in charge states that he feeds the hens five times a day—1, rolled oats; 2, a little cracked wheat; 3, cracked corn or barley; 4, soft feed and cut green bone; 5, cracked corn or cracked wheat.

About 300 lambs are raised each spring, Dorset blood predominating; all are dressed on the farm, selling for $12 apiece, and the demand is greater than the supply.

Last year there were 1,300 swine raised, Chester Whites and Berkshires being the favorites. They are kept constantly out of doors, the superintendent believing in pens only for breeding purposes. In summer they are allowed to run at large in the orchards or the woods.

The greenhouses are now on a paying basis. They are very extensive, and are devoted chiefly to the cultivation of roses and carnations. There are twenty-two varieties of carnations, and the cutting averages 2,500 per day. The demand for Briarcliff flowers has increased to such an extent that two more large houses have been erected, each holding 40,000 plants. During the winter the carnations bring eight, ten, and twelve cents apiece. Here are some of the prices for Briarcliff Farms products: milk, ten cents per quart; cream, testing fifty per cent. butter fat, eighty cents; butter, sixty cents per pound, sold mostly in New York and much of it to clubs; eggs, thirty-five to fifty cents, and cannot begin to supply demand; broilers, from $1.50

LOOKING NORTH FROM NEAR THE RESERVOIR

A SECTION OF THE COW STABLES

to $3.00 per pair; sausage, twenty cents per pound, and asparagus when in season, thirty-five to fifty cents.

The estate is enclosed by a fence made of stones taken from the Farms, and within this is a very live community. There is an excellent system of water-works carrying the purest and best of spring water over the Farms and a pretty railroad station, schoolhouse, a post office, a telegraph and a long distance telephone station. In addition to these there is a large electrical power-house, which furnishes the power needed on the farms and supplies lights in all the buildings and residences. In 1896 Mr. Law wished to build a church that all could attend. He was himself a Presbyterian, but upon inquiry he found that there was no Congregationalist in the place; so he called the church a Congregationalist church, and a very pretty ivy-mantled place of worship it is, with beautiful stained-glass windows and a stone parsonage next door. Mr. Law is also building the Briarcliff Lodge, a beautiful hotel of wood and stone. Prominent speakers are invited from time to time to talk to the men. On these occasions the

THE RESIDENCE OF MR. W. W. LAW

A SHORT CUT TO THE BARN

THE RESIDENCE OF MR. W. W. LAW
The library is on the right

Briarcliff orchestra, made up of the farm workers, usually contributes its share to the entertainment. The son of the owner of Briarcliff is a member of this orchestra. The men are met on a footing of equality, which enlists their interest and coöperation and brings closer relations between employer and worker, and this is one of the key-notes of successful social betterment.

The home-idea is a large part of Mr. Law's design for his community of three hundred workers. He feels that it is better for the men to own their homes and feel pride in them; so he sells a plot of land fifty by fifty or seventy-five by one hundred and fifty feet to any desirable worker at a nominal price; he then asks him to choose just what kind of a house he will have, and builds it for him, taking a mortgage on it, to be paid off at easy stages.

For the unmarried men there is a home known as "Dalmeny." No one is obliged to live there, but the house is so well kept that it is not large enough for all who desire to come. The cost of living is from fifteen to eighteen dollars a month, including room, board and laundry. There are separate rooms for seventy men, with free access to shower-baths and tubs on every floor. On the ground floor is a smoking and assembly-room, adjoining which is a lavatory with marble basins and a plentiful supply of clean towels, so that cleanliness is not only possible, but convenient. One of the rooms in the house is kept for a barber who is paid by the men. Mr. Law frequently joins the men at their meals, and they seldom fail to make themselves presentable before they sit down to the table. Upon the walls are inscriptions, one from Epictetus reading:

"God hath given thee to thyself and saith, I had none more worthy of trust than thee; keep this man such as he was by nature, Reverent,

Faithful, High, Unterrified, Unshaken of Passion, Untroubled."

In many places about the Farms a notice is posted beginning with the verse

"If a cobbler by trade, I'll make it my pride
The best of all cobblers to be
And if only a tinker no tinker on earth
Shall mend an old kettle like me."

Following this is a list of money prizes to be awarded at Christmas time, for the cleanest cow barn, for the most careful and thrifty teamster, for the man who has done the best ploughing, the best harrowing, who has raised the most chickens, etc., etc., and there is a prize for the neatest dwelling including yard and road in front of house. The prizes are esteemed less for their money value than as an expression of the interest and sympathy of the owner of Briarcliff.

Thus has the estate of Briarcliff taken its place as a force for the advancement of the agricultural class. It gives no man more than he earns, but it helps him do for himself. There is good fellowship prevailing there, and a great respect and devotion to the interests of the man who has made life happy and healthy for those about him. According to the owner's expressed desire, "the whole thought of this place is set to uplift the products of the earth," and likewise it uplifts the human life within it. Not less noticeable than the miles and miles of good roads, the artistic lawns and shrubbery, the profusion of flowers, the cleanliness of fields and barns, is the air of contentment of workers, children and animals. The social result aimed at has been achieved, and the owner of Briarcliff has earned this distinction—that he is himself one of the happiest men in the world. Therein he is more successful than most of the philosophers and poets have been who have simply extolled the agricultural life; for he has made its blessings real to himself, and to others.

PICTURESQUE ROCK LEDGES COVERED WITH ROSE VINES

A DAY'S WORK ON A CATTLE RANCH

BY

EARL MAYO

Illustrated from Photographs by W. G. Walker, Cheyenne

THE cook's cry of "Grub p-i-l-e!" came but faintly and carried nothing of its real import to my ears dulled by the deep slumber that followed a day in the saddle.

The air of Northern Wyoming is sharp at 3.30 in the morning, even at the beginning of May, and it was very comfortable under heavy blankets. But in a moment I was brought to a sitting posture by a wild yell that sounded close beside me. I observed from the laughing face of my neighbor on the right, Hen Williams, that he was the author of the disturbance. Hen was a six-footer from Texas, and his piercing yell was more effective than the call of the cook in rousing the ranch-house, for it permanently routed all thoughts of sleep, and with much good-natured swearing the twenty-six cowboys slowly rose, rolled up their blankets and completed their morning toilet.

Before breakfast was done, a chorus of neighing sounds came from outside, and the "horse-wrangler" rode up behind the two hundred ponies which were to furnish mounts for the men. Hastily gathering up their saddles, bridles and ropes the men hurried away to secure their mounts from the corral, and as soon as the ponies were saddled the day's work was begun. Preparations for the round-up had been making for two or three days, but this was the first day of the spring branding and there was a subdued air of excitement and an unusual bustle among the ordinarily phlegmatic cow-men.

Every man's work had been assigned him by the foreman, and they quickly scattered to their various tasks. I decided to accompany Hank Long who was to beat up the coulees along the canyon on the northwest section of the range and to join the others at noon at the round-up. Most of the "outfit" represented the B B C ranch, but some two or three smaller owners joined in the work. With the usual idiocy of a tenderfoot, I expected to see cattle on every hand covering the range in great groups, as they were pictured, I remembered, in my school geography. Of course if this were the case the grass would soon run short. Not a cow or a steer was in sight when we left the ranch-house, and it was not until we had ridden four or five miles and had descended into the canyon that we began to come across them singly and in groups of two or three or half a dozen.

It was not necessary to run the cattle very far. By following them perhaps a quarter of a mile they received sufficient impetus to carry them forward a long distance. "They'll meet up with other cattle" explained Hank as

A PITCHING BRONCHO

BRINGING UP THE HORSE CAVOY

we rode back toward the canyon, "and that will keep 'em going, for its shore cow nature to follow any other cow that's traveling a little ahead of her."

As the morning wore on we started up a large number of cattle, winding our way in and out among the numerous little gulleys that ran back from the sides of the canyon. Almost all started at full speed as soon as they observed the ponies approaching, while Hank skilfully directed their flight by riding along on one flank or the other, spurring them on by the peculiar sharp-toned yell of the cowboy.

At length, an hour before noon, we came to a point where a deep gulch intersected the canyon. Hank reined his pony aside.

"Sam covered her up to here" he said, "we'll turn off now."

On the plain that stretched for miles in long wavy folds from the edge of the canyon we could see the cattle converging from all directions, drifting slowly along with frequent stops for grazing; keeping the direction given them when they were first set in motion and gradually concentrating toward the distant spot where we could see the gleam of the white canvas stretched from the mess-wagon.

We approached the camp in a wide circle, riding along the rear of the line of grazing cattle and giving those that lagged behind a fresh impulse toward their forward journey. Hundreds of them were gathered within view and the scene began to look more like the pictures in the school geography, but still the cattle were not bunched but scattered over several miles. They were brought together now with a rapidity that was surprising, and within a half-hour the whole herd of some fifteen or sixteen hundred were massed in a compact mob that filled the air with a great cloud of dust and with a chorus of lowing, bleating and bellowing that sounded, half a mile away, like the breaking of ocean surf, so steadily was it maintained.

The saddle had grown a trifle irksome to

"ROPING" AND "CUTTING-OUT"

DINNER AT THE "ROUND-UP"

me by the time we made the camp, for I was not fully accustomed to the abrupt movements of the wiry little cow pony that had been giving me lessons all the morning in the art of rounding-up cattle.

The smell that came from the trench behind the cook-wagon, where various kettles had been strung, was an appetizing one, and it seemed grateful to stretch one's limbs for a few moments under the shade of the canvas awning, for the sun had become blistering hot and the alkali dust from the vicinity of the herd added to the discomfort.

All the boys of the "outfit," whom we had not seen since morning, were there. Most of them had been engaged in work similar to ours in different parts of the range, and had swept the country clear of cattle for six or

DRAGGING A CALF TO BE BRANDED

BRANDING CALVES

t miles around, with the exception of a strays that had wandered into some re- e gully.

he horses ridden during the morning were ed into the horse corral, for their share of day's work was finished and other mounts d be used for the afternoon. As soon as "chuck" or "grub" was ready, the men o with a will on a meal of "sour dough" its, beef, red beans and the indispensable k coffee. This meal was marked by even ter informality than the one of the morn-

The men began without stopping to re- e their hats, standing or sitting flat upon ground with legs crossed tailor-fashion. many minutes were wasted and as soon man finished he moved away, dropping lishes into the pan which the cook had d on top of a convenient barrel.

esh horses were secured from the corral preparations were made for branding, h is the real purpose of the round-up. of the hundreds of long-legged little s running about in bawling confusion g the herd must be marked, and the work must be done thoroughly, for these youngsters represent the increase of the herd and the future profits of the cattle company.

The men went about their work with the celerity of long experience. The branding crew built their fire, examining the irons and heating them to a glowing red. The ropers who were to do the "cutting-out" cinched their saddles with more than the ordinary pull and shook out their ropes to see that they were in good order. There is nothing in this technical part of the work that a novice can undertake, and I was informed that my part would consist in looking on, unless I wished to assist in the "cussin," which was part of the programme.

Among the half-dozen mounts used by each of the cowboys there is pretty certain to be one that he chooses for "cutting-out," and indeed the work is one in which an intelligent pony can be of great assistance to its rider. Cutting-out consists in separating single cattle from the herd, in this case the cows with unbranded calves. The men rode directly into the herd, the ponies pushing their way among

the swaying, crowding cattle, following after some particular calf which turned hither and thither, crowding close up to the side of its mother in an effort to escape. As soon as the pony had determined the particular calf which was to be worked out of the mass he followed it, keeping close at its heels and continually urging it toward the edge of the shifting crowd until finally it broke into the open. Then the rope flashed out, gripped the surprised youngster about the hind legs and, as the trained pony settled back in his tracks, brought the calf smartly down upon the ground.

In a moment more it was being hauled helter skelter through sand and sage-brush to the place where the branding crew were waiting, its mother following with bellowing protest.

As the calf was drawn up to the fire one of the waiting men seized it by the ears and sat down heavily upon its neck; while another, bracing his foot against one hind leg, pushed it forward as far as possible, at the same time throwing his weight backward upon the other, which he grasped with his hands, to render the flank tense and immovable. Upon this flank the man with the iron quickly pressed down his instrument, burning through the hair deep into the hide, so that thenceforth the calf would wear the same mark as its mother, the mark which would determine its ownership absolutely, no matter how far away upon the range it might wander. With all the hundreds of cattle mixed together, this might seem to be a crude and unsatisfactory way of determining ownership, and that mistakes as to their progeny might occur among the cows themselves. The cattlemen, however, rely upon the instinct of the members of their herds, and they claim that while a calf may sometimes mistake its mother, the cow never makes an error as to her calf.

As each calf was branded with its appropriate mark, the tally-keeper standing by entered it on the record in his book, calling out in monotone, "One calf, B B C." "A & Z, one calf," and so forth. Meanwhile the cowboy who was occupied in the work of cutting-out had gone back in search of fresh victims, and when the branding was completed another man drove the calf away to the spot where those already branded were being formed into another herd.

JUST BRANDED

A GENERAL VIEW OF THE "ROUND-UP"

With a dozen men employed in the work of cutting-out, the men of the branding crew were kept constantly busy. It was hard work and the horses were changed before the middle of the afternoon, but the men kept on, the dust making a thicker and thicker coating upon their clothing and mingling with the perspiration that rolled down their cheeks.

It was a stirring scene: the swaying herd of cattle, the scampering calves, the agile little ponies flying in and out, straining at the ropes, their erect, sinewy riders with shirts open at the throat, knotted handkerchiefs waving and hatbrims pushed back. It was a scene full of noise and life: the bellowing of cows, the bleating and squealing of tortured calves, the shouts of the men and the pounding of hoofs. It was an epitome of the whole cattle business.

As the original herd grew smaller and the rows of figures in the tally-book longer, an occasional yearling without a brand was brought up to the fire, roped usually "fore and aft," by two cowboys working together. These were the "mavericks" that had escaped the branding-iron in their period of calfdom, their ownership being thus left uncertain. They were branded in accordance with the rule which allots the mavericks to the different herds in proportion to the size of the herds.

The rushing, the shouting, the bellowing, and the sizzling of the burning-irons went on until after sundown, and there were still a number of unbranded calves and mavericks. These were left until the following day and a guard was set to take charge of them during the night, while the others, having been duly labeled and recorded, were allowed to wander out upon the range as they would.

The evening meal, with the same menu that had been served in the middle of the day, was disposed of with even greater relish. Afterward the men sat down near the trench in which the fire was burning and smoked pipes or cigarettes, saying little, but enjoying a rest earned by a day of the hardest kind of work. As soon as the stars began to come out, the men secured their rolls of blankets from the depths of the mess wagon and prepared their shake-downs for the night.

With my head on my coat, chosen in preference to a saddle for my pillow, and with only a comforting blanket and a canvas covering between me and the stars, it did not take long to win the sound sleep of the outdoor man.

OUR SPECIAL PARTNER—ENGLAND

HOW WE ARE MAKING PRACTICAL IMPROVEMENTS IN THE OLD HOME, FOR THE BENEFIT BOTH OF THE ENGLISH AND OF OURSELVES—THE METHODS WHEREBY WE GAIN TRADE IN THE BRITISH COLONIES

BY

ULYSSES D. EDDY

SEVERAL years ago an American manufacturer of wood-working machinery sold a planing machine to go to Vienna. A few months later he was in that city and he called upon the purchasers and asked how they liked the machine. He was told it was giving entire satisfaction. He asked to see it in operation and they took him into the shop where he found it running at 400 revolutions per minute. He protested vigorously and offered to show them how it should be run—at 3,000 revolutions per minute. After great persuasion they allowed him to belt it up to the increased speed, and the whole staff of the establishment gathered and gazed in wonder at the enormous amount of work done by the machine under his skilful management. They thanked him most profusely for indicating how much more valuable the machine was than they had supposed. He went his way, and returning after several months he again visited the works and found the machine running at 400 revolutions per minute. This is an illustration of the cardinal difference between American methods and those of most other countries. The American as a master

of a machine gets far more out of it than any other workman.

England has for many years been the greatest customer of the United States. In the beginning this country sent her raw materials, and raw materials only. It was not until the lean American years from '73 to '79 that American export trade to England of manufactured merchandise began to be of any importance. During that period the times were so bad in our country that everyone became economical and the cost of production was brought down very low. Manufacturers who could not dispose of their wares in the United States began to look for a market in England, and with remarkable success. The trade thus initiated has steadily grown. In this way to the old business of the export of raw materials to Great Britain was added also manufactured products.

The first successes of the United States were in the shipment of articles made of wood. The raw material for this industry was far more abundant in the United States and we were much more skilful in working it. This was followed by a development of the trade in all kinds of articles that could be reproduced in indefinite numbers of exactly the same pattern. The shops of Great Britain began to be filled with knick-knacks of American production, such as clocks, lamps and an infinite variety of metal goods, which were not only good, but very cheap. This trade has continued and increased until the stocks of many of the shops seem to be one-half American.

During this time, however, all kinds of tools for working wood had been produced of better quality and at lower cost in the United States than elsewhere. The conservative British mechanics at first preferred to stick to the English patterns, which are cruder in manufacture, but they gradually adopted the American tool, because of its greater convenience and perfection, though it was no cheaper.

As far as machinery is concerned, the first British field in which the United States triumphed was that of printing machinery. This was closely followed by wood-working machinery and later by machines for working iron. Gradually a vast trade has been built up. The English manufacturers of competing machinery have steadily adopted American ideas and patterns, but they have always remained behind in improvement of mechanism, so that the export trade in machinery has grown to great proportions.

At the same time that the machinery trade was growing, the substitution of manufactured food products for the crude products was also taking place. Wheat was shipped more and more in the form of flour, until today American flour is seen in every hole and corner of the United Kingdom. Other food products also steadily accredited themselves.

After the American printing machinery became thoroughly established, American paper began to be pushed upon the English market, and in spite of great resistance from English manufacturers, has finally largely conquered the field.

With the decrease of distance and time in industrial and commercial operations, swiftness of action has come to be of vastly greater import than formerly, and "American celerity" has perhaps done more than any other quality to advance American trade in foreign countries.

With the natural "celerity" of the American, he was the first to adopt electricity. He made it in the beginning his messenger, and later, his motor. In the taking up of electrical development in England, the engineering profession felt itself competent to pass upon and determine the proper proportions and dimensions of all forms of electrical machinery and apparatus. In order to emphasize his knowledge, each engineer seemed to insist upon modifications in proposed plants, some of which were trifling, but all of which cost enormously. A manufacturer of electrical machinery in England lamented to me bitterly over the fact that he had lofts filled with patterns which he had been obliged to make in order to meet the whims and idiosyncrasies of engineers. Of course, the cost of producing from each set of patterns but one plant was enormous and he found himself unable to compete with American manufacturers.

Now, having first fed the English, then furnished them the raw materials for their factories, then furnished the finished product ready for the use of the consumer, we, through this electrical development, began to attack the transport problem, and today all the electrical railways being constructed there are on lines created and developed by American engineers and manufacturers. But so vast has been the demand upon the American works

for producing all forms of electrical apparatus, that the more important ones have found it necessary to establish branches in England. Huge works have been built by the General Electric Company, and also by the Westinghouse Company. These works, however, are not equipped and run on English ideas, but on American ideas, and are already having a profound effect upon labor in Great Britain, and even upon its housing, for the Westinghouse Company is building a model American village near Manchester, with streets crossing each other at right angles, numbered and not named.

Americans have now taken up the question of London transport in spite of the great opposition encountered by all such improvements in England. It is reasonable to believe that they will succeed in a few years in making London as convenient as New York, as far as urban transport is concerned.

The English engineer and manufacturer seem to resist the "standardizing" of manufactures. In order that manufacturers may have a profit from repairs they will sacrifice the consumer. For instance, in the same form of mechanism of a machine which is produced by many manufacturers, each one will introduce a different pitch of thread in the screws, or some other modification, to force the consumer to come back to him to repair breakages. In America, on the other hand, the manufacturers meet and standardize, and thus show an enlightened selfishness, which brings them in the larger profit.

Years ago English railway lines began to buy American locomotives. In many cases the English engineer had interfered and insisted on modifications in the type which injured the efficiency of the machine and added to its cost. The same old curse of all American progress in England—the lack of standardizing—interfered to make the locomotives less effective than they would otherwise have been; but even where American locomotives were bought, an English engineer could not get the service out of them that they were built for. Complaints were made of large coal consumption, when the question was not of the consumption of coal, but power realized from each pound. Locomotives of large power were hitched to toy trains and criticized because they burned more coal than the English toy locomotive; and to this day no American locomotive has ever had a fair and proper trial in England. Nevertheless, they are certain to find their way, and the demand for them is sure to increase, while English builders must resort to standardization or retire from the field.

But the most striking advance of America upon England has been in the shipments of manufactures made of iron and steel. To bring iron ore from the distant regions of Lake Superior to Pittsburg, there meeting coke brought from Connellsville, manufacturing the steel, which after being finished is moved to the seaboard and carried 3,300 miles across the ocean in competition with English producers of steel, is perhaps the most remarkable development of American ability to produce and transport cheaply; and it is a melancholy fact, from an English standpoint, that railways paying small and decreasing dividends cannot move this steel from the coast to the consuming point in the interior without charging for the service more than it costs to bring it from Pittsburg to the English seaport.

One of the most dramatic invasions of England has been that of the Diamond Match Company. This American trust has spent years perfecting the most remarkable automatic machinery known, which made the manufacture, formerly considered very unhealthy and dangerous, absolutely safe for the working people. They determined to enter the English market and built a factory near Liverpool. They found that the girls presenting themselves for employment were in the most dreadful condition physically—half starved and altogether utterly different from the working women in their American factories. The first thing done was to examine the teeth of every applicant. If found defective they were filled by the factory dentist, for necrosis makes its attack through the teeth. Suitable working apparel was furnished them by the works. A lunch was prepared to be served in a light and pleasant room at midday. In fact everything to improve the healthy cheerfulness, and thereby improve the working efficiency, of these girls was done in exact imitation of the methods followed in the United States. Within two or three months the transformation in the condition of the working women was marvelous. They did their work in

bright, clean quarters, entirely free from bad air or phosphoric vapors, and they produced matches at prices far below their English competitors, who had clung to antiquated methods, old-fashioned machinery, defective factories and an utter lack of care for the health and condition of employees.

As a result of the American competition the English works were finally obliged to succumb, and were taken over by the American factory. At the stockholders' meeting where this was done the head of the Diamond Match Company told the stockholders a great many truths, informing them that the business was badly managed and that about every piece of machinery in their works when they were taken over would be thrown in the scrap heap. The stockholders, with true English liking for a man who talks straight from the shoulder, gladly gave their votes to put the industry in the control of competence.

Twenty-five years ago England was the great exporting country. She was in the height of her power as an industrial nation. She held a firm hand over her trade, which was mainly done through commercial houses in London, Glasgow and Liverpool. These houses had their branches scattered over all the world, and the branches were kept in a thoroughly subordinate position. As time went on, the then branches, in the British colonies especially, began to become more important than the home houses. In many cases the managers organized independent firms, sending their orders to their old partners in England for execution. At that time, if an American merchant wished to sell goods to Australia, China, or South Africa, the best way to success was to go to London and solicit the orders of the home houses. Under this system everything possible was given out to English manufacturers, and only orders for merchandise that was much cheaper were passed to American merchants. Under these circumstances the American export trade was thoroughly in the hands of the English; but certain American merchants made up their mind that they would no longer work in this indirect manner, and they began to visit the markets with which they wished to do business, and to solicit orders.

Under the pressure of this solicitation of direct business, and backed by the greater importance of the former branches, orders were no longer sent to London, but sent direct to the American merchant who was requested to draw upon the London agent for his reimbursement for the shipment. Later, the separation between the home houses and the branches became still more complete, and the Australian or South African merchant, in sending his order to the American merchant, furnished him with a letter of credit upon some London agent of his bank in the colony, or else the merchant drew direct upon the customer in Australia, sending the draft through a bank for collection. This method became in a few years, practically, the only one, and Americans ceased, to a large extent, to look to England for orders for shipment to her dependencies and colonies. The same process operated in the shipment of the merchandise as in the execution of the orders. In the beginning much of the merchandise was sent to England for transshipment to its destination. Today, there is scarcely a market in the world with which New York has not direct steam communication at sufficiently frequent intervals to serve the trade. This process has amounted to a Declaration of Independence of England commercially by the colonies of England.

When visiting England thirty years ago, it was extremely difficult to get access to a British merchant. It involved making an appointment beforehand, which would not be granted unless the person asking it were properly introduced and appeared before the British merchant in the full commercial uniform of England of that day—the "top" hat, the frock coat, etc. Today, England, even in this respect, has become largely Americanized—the sack coat, in the warm weather the straw hat, and easy accessibility are similar to conditions existing in the United States.

In our relations with England as an industrial power, we were, first, her customers; then her servants, and we have now become her allies.

While the exportation of material things to England has been of enormous volume and importance to them and to us, after all the most precious commodity that we have sent there is American ability. We are indebted to England for a splendid heritage in her literature, and her invention, her capacity for hard and continuous labor, her intellectual activity; but

it must be pleasant to all Americans to feel that we are repaying the debt.

We are engaged in the process of taking over the old country with a view to its reconstruction in the interests of England and America on modern lines. We have gone back to the old homestead and are engaged in refurnishing it and introducing modern improvements. The old folks will be really much more comfortable and happy after we have done this than they were before. And one of the most remarkable features of this important movement is the spirit in which Englishmen have met it. They have replaced obstinacy with encouragement and coöperation.

It must be understood that there are fields of human activity of enormous importance in which England still retains her primacy and will for years to come. While we have a great deal to teach, we still have much to learn.

We shall doubtless develop qualities other than "Hustle," which is today our predominant note, and, while England is taking on more of it, it is to be assumed that out of the intimate relations existing we will acquire some of her dogged determination, staunchness and conservatism. We have been firing at a target, but we are now becoming a target ourselves.

MORE STORIES OF THE AMERICAN INVASION OF ENGLAND

BY

AN AMERICAN IN ENGLAND

THE evidence of the Americanization of London is so overwhelming as to remove all doubt about its ultimate success. All manner of rapid transit is to be in American hands, installed with their own methods of traction; and the organization of business for its management is carried on by Americans. Until now there have been no trust companies in England of the kind so well known at home, and the large combinations of capital generally called trusts have been organized here only to meet and compete with American competition. For the first time London is now seeing great steel frame buildings raised like skeletons as far apart as the Duke of Marlborough's new house in Curzon street and a great office building in Chancery Lane. In all manner of electric industries Americans have almost undisputed possession.

The new Governmental system of telephones has been mainly supplied from Chicago; and the streets are full of various kinds of automobiles, electric from America and petroleum from the Continent, those of English make being so rare as to be almost non-existent. In fact, in business life from typewriters to lifts (elevators) the whole world is operated under methods and with mechanical aids from the United States. Added to this there are many trades so completely in Yankee hands as to defy competition. There are very few amateur cameras sold in England but American ones; and, if the present growth goes on, in a few years London will be completely shod from across the Atlantic. There is now being held in the Agricultural Hall an International Shoe and Leather Fair. It so completely demonstrates the superiority of the American methods of handling leather and shoemaking that those English makers who have not completely reorganized their establishments with Yankee machinery are not showing at all. As one paper remarked after quoting several leading British shoe manufacturers: "The Americans are still twenty years ahead of us in all manner of machine made shoes."

To go from shoes into domestic life one finds the housemaids all wearing cheap American shirt-waists and sweeping with American carpet sweepers. All the tinned vegetables served in England come across the ocean, even though local labels are pasted on them; and in every restaurant advertisements of American pickles and sauces stare you in the

face. As an article in the *Daily Mail* recently had it:

"In the domestic life we have got to this: the average man rises in the morning from his New England sheets, he shaves with American soap and a Yankee safety razor, pulls on his Boston boots over his socks from North Carolina, fastens his Connecticut braces, slips his Waltham or Waterbury watch in his pocket and sits down to breakfast. There he congratulates his wife on the way her Illinois straight-front corset sets off her Massachusetts blouse (shirt waist) and when he tackles his breakfast he eats bread made from prairie flour, (possibly doctored at the special establishments on the lakes), tinned oysters from Baltimore and a little Kansas City bacon, while his wife plays with a little Chicago ox tongue. The children are given American oats. At the same time he reads his morning paper printed by American machines on American paper with American ink and, possibly, edited by a smart journalist from New York city.

"He rushes out, catches the electric tram (New York) to Shepards Bush, where he gets in a Yankee elevator to take him on to the American fitted electric railway to the city.

"At his office of course everything is American. He sits on a Nebraska swivel chair before a Michigan roll-top desk, writes his letters on a Syracuse typewriter signing them with a New York fountain pen and drying them with a blotting sheet from New England. The letter copies are put away in files manufactured in Grand Rapids.

"At lunch time he hastily swallows some cold roast beef which comes from some mid-West cow and flavors it with Pittsburg pickles, followed by some Delaware tinned peaches and then soothes his mind with a couple of Virginia cigarettes.

"To follow his course all day would be wearisome. But when evening comes he seeks relaxation at the latest American musical comedy, drinks a cocktail or some California wine and finishes up with a couple of pills made in America."

This amusing statement does not even fully cover the case. It says nothing of the light by which the man who works in London has to live, all Yankee inventions, whether arc or incandescent electric or Welsbach gas. And as to the drugs with which the average Englishman doctors himself and his family (patent medicines) they are almost wholly from the United States. What is known as the tabloid system was for a long time bitterly opposed by British chemists on the ground that it cut them wholly out of the profits of prescription filling. But in spite of reduced profits they have had to meet the demand.

Just without the sphere of domestic life come the great trades of printing and publishing. The newspaper is a domestic institution and not only is John Bull's as Americanized as the *Daily Mail* says, but it is very probably set up on American type-setting machines and folded on presses from the same source. As for the books he reads—well, only yesterday one of the best-known reviewers in London told me that from an actual count he had reviewed ten more American books than English ones during the past six months. "And, what is more to the point" he said, "I was glad to do so. For you have men over there who are opening up the broadest fields of future English literature." Here is a significant quotation from the current number of the *Academy* (Nov. 9th).

"Our quarrel with the generality of serious English novels is that they are like a page of an atlas—they picture in detail a given part of the earth's surface and show the surrounding parts white and uninhabited. No class nor community does or can exist independently and it should be the business of the class novelist and the community novelist (we have both) to indicate the propinquity of the class above and the class beneath, a world at large. We lay the more stress on our insular failure to produce novels that portray the era, in that America has recently shown us how the feat may be performed. From that land of literary booms supereminently foolish have come two of the finest novels of the year. We mean 'The Octopus' by Frank Norris and 'Sister Carrie' by Theodore Dreiser. No one can read either of these admirable books without having learnt something—not merely about this person or that, this class or the other, but about America. The movement in them is large, racial, the vision poetic and comprehensive; the sentiment is never sentimentality. They exercise the highest function of the modern novel."

The man who began to infuse new life into American publishing has a wider power than he ever dreamed of. Not only has he revolutionized affairs at home but he is destined to stir up the dust of ages abroad. The only houses which are making money in the English publishing world are those running on American methods and following in every possible way American leadership. The great reversal of the old pilgrimage under which the majority of English publishers are now paying

annual visits to the United States amounts to even more than similar visits which in former days the Yankees made here. They not only seek books to publish but they learn how to sell them. And in a year or two at most will come the great change which the business man in literature has produced in the new country. Books will be sold here by the great department stores as shoes and sugar are—a desecration in the eyes of many an old London publisher which will send him soon into a forgotten grave.

They have had several valuable lessons in selling books brought home to their very doors. First, one American made a goodly fortune selling through the newspapers the illustrated portfolios popular at the time of the Chicago Fair. He was followed several years later by two young men, with only their Yankee cleverness to back them, who concluded that the instalment plan of bookselling had not been properly exploited in England. They chose for an experiment the old Encyclopædia Britannica. They had little trouble in getting a large number of sets to be paid for as taken. Their great difficulty was to convince London newspapers that what is known as the coupon system of advertising books was an actual aid to the circulation of the paper. By a strange freak of luck the only publishers they convinced were those who might have been thought most unlikely, the staid old *Times* Company. By this coöperation the Encyclopædia sold by the hundreds of thousands and the advantage to the paper was so evident that they soon had all the other editors turned from scoffers into suppliants. This firm has published in its own way many expensive books since and each of the young men is now estimated to be worth at least half a million dollars.

Everyone knows that American locomotives are running on British railways, both at home and in Africa, India and Australia; but some people may not know that superintendents of great English trunk lines are constantly being sent to America to learn how these roads should be run. Here is an example: Mr. Fay, Superintendent of the Line of the London & South-Western Railway has returned from what he calls "an observant holiday spent in the United States." Questioned upon the results of his observations he said:

"I maintain that in dealing with freight the Americans are far ahead of us, but they can teach us nothing in the passenger business. The average English freight truck is one of ten tons, but its load as a rule does not run to more than three. In America they carry thirty tons and I am sure these could be introduced on some English roads to advantage. I went to America converted to the pneumatic system of signalling and I come back with my favorable opinions more than confirmed. They do wonderful things over there with it. We can borrow many hints from the American signalman, particularly in the way he protects points and follows the entire course of a train upon his section."

The first and almost only advice to give to manufacturers in the United States who wish to secure a foreign market is to start at once and never rest until a footing is secured. For the open doors will be closed. In fact there are signs on all hands of a concerted effort to resuscitate British trade. Lord George Hamilton, Secretary of State for India, has called a conference of Indian railway engineers to meet in Calcutta with a view of considering the standardization of locomotives and bridges in order that anxious English manufacturers may lay their plans to furnish all demands on short notice. By far the most significant feature of the American conquest has been the organization in England of American enterprises in which English capital has coöperated and in which English workingmen will be employed. Many things are pointing to a campaign in favor of English-made products as sweeping and as successful as that now affecting union and non-union-made products. The great cigarette war now in progress seems wholly to have for its battle cry "English-made against the Yankees." And curiously enough the American tobacco people have accepted the challenge and everywhere advertise their cigarettes as "made in the U. S. A." But by far the most important enterprises have already taken into account the growing prejudice against getting everything from America. In fact, near Manchester the Trafford Park estate is being laid out in a model American village like that at Pullman, Ill., to be occupied by English employees in neighboring American factories. The Westinghouse plant alone, which has a fair proportion of English capital, expects to employ at least 5,000 of the inhabitants of the model town.

London, December 1, 1901.

THE BUREAU OF THE AMERICAN REPUBLICS

BY

W. WOODVILLE ROCKHILL

DIRECTOR OF THE BUREAU

THE Pan-American Congress, held in Washington in 1889, though theoretically convened for the specific purpose of considering arbitration and the improvement of commerce between the various Republics of this continent, had in reality a much broader object in view—it aimed at expressing, in concrete and practical form, the solidarity of interests of all America and devising means for protecting them.

The Congress rightly believed that a closer union between the countries of America could only be brought about through confidence born of friendship, and that the extension of commercial relations and general intercourse between the different States would hasten this friendship and promote union. To promote these ends the Congress created the International Union of the American Republics, and the Bureau of the American Republics was organized to be its representative to carry them into effect.

Though it was at first intended to limit the work of the Bureau to the publication of information relating to customs tariffs, port regulations, trade statistics and such like data, it was soon realized that it could be usefully employed in the general interest of diffusing exact knowledge concerning the various states of America, showing the natural solidarity of interests which united them and the necessity of devising means for their protection.

To contribute to this end the Bureau has published, besides a monthly bulletin in English, Spanish, Portuguese and French which is now in its eleventh volume, handbooks to the various countries of Central and South America, a large number of publications giving the tariffs, immigration and other laws of general interest and a great variety of information otherwise inaccessible on the commerce, industries and general conditions in the various sections of the continent. It has also published a code of commercial nomenclature designating in alphabetical order and in equivalent terms in English, Spanish and Portuguese over 50,000 commodities on which import duties are levied, for the use of the various customs services, shippers and consular officers.

Two years ago the Bureau began the preparation of special large scale maps of various Republics, compiled from the best sources, and on which all data of an economic nature, railways, telegraph lines, mines, areas of culture, etc., etc., are indicated.

As a further means of diffusing knowledge on America, the Bureau has built up a library of Americana of nearly 10,000 volumes, besides a valuable collection of maps and photographs. It receives all official documents published by the different American countries, their newspapers and most of their periodical publications and scientific magazines—some 1,700 in number.

A subject catalogue of the library has been prepared and in it are noted all works and articles on America to be found in all the libraries of Washington. The same has been done for the collection of maps.

The experience gained in the last eleven years has shown that the Bureau can be of further use in protecting the general interests of the various American States. Without the Bureau it is possible that the International Union of American Republics created by the Congress of Washington would ere this have become but a sweet memory of the past; with the Bureau and the International Executive Committee charged with a general supervision over it, it has lived and prospered and has now brought about the Congress of Mexico whose labors will, without a shadow of a doubt, still further contribute to the prosperity and happiness of each and all of the sister Republics of America.

MERCHANTMEN TWICE AS BIG AS MEN-OF-WAR

THE BUILDING IN A NEW ENGLAND VILLAGE OF SHIPS FOR THE PACIFIC TRADE THAT WILL BE THE CARRIERS OF THE BIGGEST CARGOES AFLOAT—A MAMMOTH DRY-DOCK

BY

ARTHUR GOODRICH

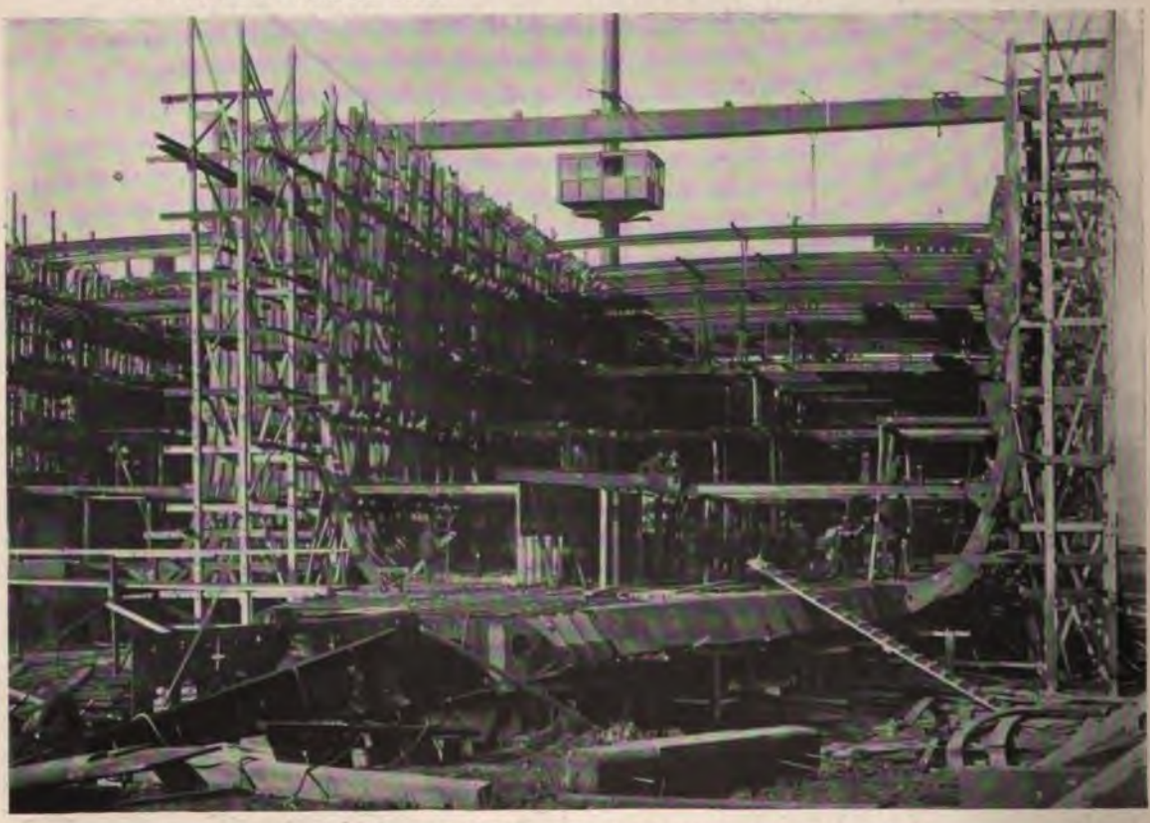
PLANING THE PLATES

DIRECTLY opposite Fort Trumbull and only a mile or two from old Fort Griswold, where the Connecticut patriots defended themselves against Benedict Arnold and the British, the shore of New London harbor bends into a small saucer-like cove. Little more than a decade ago the main line of the railroad ended at the water's edge of this curve of land, and the passengers and freight were ferried across to the quiet town opposite. When the more direct road was built the place fell into disuse. An old round-house and a few lines of rusty track alone remained to locate the railway terminal that had lost itself.

One day, two years ago, some men came out of the pushing, noisy world and spent hours tramping over the rough ground and rock and disjointed rails. One of them was a short, stocky man with a set jaw and steady eyes, who talked very little in a quiet, abrupt fashion and who saw a great deal. He came from the race of Yankees who used to turn the Maine forests into boats for the world. Another with piercing eyes talked rapidly with repressed calm and went over the ground many times up and down the shore with a tense, nervous stride. When they were done they steamed away in the big yacht that had brought them. They had seen things that would set in motion money enough to buy many times the town they had visited, perhaps eventually the activities of the entire harbor. They had noted among other things that for an eighth of a mile and more back

"THE CURVED WALLS OF STEEL"

from the water the whole swing of shore was floored with ridged rock, that the deepest channel of the harbor ran along this bank, and that the neglected tracks still connected the shore with the main line of railroad. This place, which had tried to be a railway terminal and had failed, had all the traits of a good shipyard. As a result of their observation Mr. James J. Hill, in the spring of 1900, gave to Mr. C. R. Hanscom and his associates, whose shipyard was an out-of-the-way ridge of rock on the Connecticut coast, and whose equipment was a round-house and a forsaken railroad, the $5,000,000 contract for the building of the two biggest ships in the world, the first of the fleet which will help to carry America to Asia and Asia back to America across the Pacific. In the spring, unless something unforeseen occurs, two great hulls will be launched. In two years, therefore, a thoroughly equipped shipyard will have been constructed in the little town of Groton, Conn., and the two largest boats afloat, each of



LOOKING INTO ONE OF THE SHIPS FROM THE UNFINISHED STERN

Showing the middle one of the three crosses which hold the overhead trolley. The electric switches that manipulate the working of the trolley are located in the little box-like cabin below the girder

"STANDING UP OUT OF A MAZE OF SCAFFOLDING AND STAYS"

which can carry on a single trip 20,000 tons of American products, will have been built.

It is only an incident in the rapid development of American shipping. During the Spanish War Mr. C. P. Huntington noticed that our battleships were sent up to Halifax for docking facilities. As a result the largest single dry dock in the world was built at Newport News, 827 feet in length—long enough for the *Oregon* and the *Alabama* to lie inside end to end,—162 feet wide at the top—giving room for two large ships to pass each other when the

"THE ARMY OF MEN POUR OUT OF THE SEEMINGLY EMPTY SHIPS"

LOOKING DOWN TOWARD THE SHIPS
The cross at the bows in the foreground

dock has been flooded,—and holding thirty feet of water—deeper, therefore, than parts of the present channel in New York harbor. This great wooden platter in which, at times, three large ships lie, is built of timber and concrete upon piles and has an outer wall of solid granite. Around it on three sides are the thoroughly equipped works, and the ship, once inside, is transformed in an hour into a machine shop with a thousand men at work. Necessity demanded the big dock. The call from the East for American products demanded larger carriers. And so they are building the big ships at New London.

In the beginning the place had to be made ready for its new occupation. Tons of earth were excavated and projecting rock was blasted out to make room for the big ships. Then the structures were hurriedly put up in which the boats were to be planned, their woodwork turned and finished, their great plates of steel, the beams and the twelve-inch channels of their frames bent and made ready, and after these the boats themselves. They are building, nowadays, ships that bridge oceans and house small cities of people and goods, much as they are sending up high shafts of buildings from rock far out into the sunshine, or as they are tying together separated land stretches with cords of steel. These big Groton boats were built first of all in a low frame building looking toward the water and toward

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THE NEWPORT NEWS DRY DOCK

the great black hulks, scarred from foundry, machine-shop and bending-floor and already weather beaten, which are daily reaching, through a maze of scaffolding and stays, farther forward and aft and higher from their rock foundation. All that noisy struggle—the incessant crack of compressed-air machines, sounding at a distance through the stillness like reports of many rapid-fire rifles, the shouts of the men, the rush across the yard of a platoon carrying a great steel beam, the grim activity on all sides which the engineers watch from their windows—is part of the campaign they plannêd and are planning night and day at their drawing tables. Most of the important features of both yards and ships have been designed or suggested by Mr. Hanscom himself. Every ounce of the 25,000 tons of steel was weighed on paper and cut into lengths and sheets before the foundry knew the big ships were building. Some details were necessarily left for others. It would not be practicable to locate four million rivet holes distributed over the two ships. In thin wooden templets the big boats are stretched out on the floor of a long upper room, and when the beams and plates—some of them weighing half a hundred tons apiece—arrive, a crowd of straining men carries them under the monster machines which crunch out the smooth holes for the rivets to fill. Over on a grilled floor by the furnaces other gangs of men bend the red-hot beams into the shapes they are to take in the good ships' sides. Up and down the free spaces of the yard, past a veritable army of kegs containing the rivets which will hold them in place, the sheathing plates—each an inch or two thick of solid steel and big as a Goliath's shield—are dragged by steam power to where they can be hoisted into position.

Taking the boats at broadside there is little visible human activity. There is a rattling fire of varied noises from every quarter. Three lofty staves of steel, great stationary masts, extend high above the work, one from its very midst, one at the sterns and one at the bows. Cross girders which reach out far beyond the sides of the twin boats make each mast into a gaunt cross. Connecting these girders over each ship and working forward and aft over each alternately is a long overhead trolley which swings plates of steel, many tons in weight, out into the open, carries them smoothly along over the heads of the workmen below, and finally unloads them at the spot where they are to be fitted into place. Impelled by nothing that can be seen, these steel trees, by the manipulation of electric switches in a box-like cabin on the middle mast, seem to hand the heaviest materials to the men who wait to rivet each into the ships' sides or partitions. Along the hulls here and there a man, sitting in some unsheathed hole in the sides or upon some projection, planes off the steel with a small compressed-air machine which prods away at the plates with the noisy hammering of a persistent woodpecker. Otherwise no one is in sight on the hulls.

Back of the rough fortress-like wall of steel, however, is a veritable chaos of activity. You enter out of Sunday quiet and sunshine into the mammoth workshop of a modern Vulcan. Choppy waves of sharp crackling sounds and dull, more distant thudding break over you from all sides as you pass from compartment to compartment. The air quivers around you at the repeated assaults. But there is not a tremor in the steel floor on which you walk, for all that upwards of a hundred machines are hammering away at its supports and adjacent parts. Grimy-faced, brawny men are everywhere, men from the Maine coast, from Philadelphia shipyards and from the docks of the South, Yankees, Italians, Germans, Swedes, Irish, Negroes, a whole Western civilization making ships for the East. Some are riveting down in the caverns near the keel with red-hot rivets that, heated in the forges above, slide down through pipes to the waiting workmen. Pairs of men gripping a compressed-air machine that shakes with power are crowding wider the punched holes in partition plates, while others, working under an electric bulb that contrasts strangely with the bareness and confusion of the place are pushing down the red-hot steel into a few of the millions of flush rivets that bind the ship together into a water-tight mass. In one corner where the light from a forge fire flickers among the shadows, a dozen men are laboriously lifting into place with ropes a great plate of steel about twenty-five feet long and six feet wide. The long trolley which handles heavy weights in the open so easily is of no avail in tightly fitted compartments in the heart of the hull.

Up a ladder to the next deck and the same scene presents itself, and up another and another until the sunshine takes the place of the incandescent lighting below. In this combined apartment hotel and warehouse of the sea there will be eight distinct stories. At the stern of the farther boat almost at the water's edge they are setting up the confused interlacings of steel which locate the propelling agent of this twin-screw liner. Back of it and at a similar distance from the bow end of the boats are the massive collision bulkheads, which hold the ship safe even though she beats both her prow and stern to pieces against the rocks. Little else but rocks or equally tough steel would more than dent her. A wooden boat or a rotted derelict she would cut through and crush.

It is difficult to fully realize what a part these curved walls of steel, looming up fifty-six feet into the air, six hundred and fifty feet long—placed on end as high as four Niagaras superimposed upon each other—and of seventy-four feet beam, each twice the size of our larger battleships, are to play in the march of the world's progress.

"They will revolutionize the carrying trade of the Pacific," said Mr. Hill recently.

Certainly the expanding production of the great Northwest has been handicapped by a lack of ships. The carrying capacity of each of these boats will equal that of half a dozen steamers of common size on the Pacific combined Forty-five cargo winches will feed its maw through twice as many hatches as the *Celtic* contains. Each boat can carry 400 head of cattle, 5,000 tons of coal and 8,000 tons of water. An entire locomotive can be shipped ready to run out on some Oriental railway; 1,500 passengers can be accommodated — 150 first class, 150 second class, 200 third class and 1,000 steerage—besides a crew of 300. The arrangement of classes will in a measure divide the American passengers from the Asiatics. Turned into an army transport each ship could carry ten full regiments and guns, from an eight-inch down. They will be thirty per cent. stronger than any boats now afloat, encased as they are in a hull everywhere three inches thick of steel. They are being built for stability rather than for speed, but their triple-expansion engines, taking steam from water-tube boilers aggregating 12,000 horse-power, will drive them through fog or fair weather at an average speed of fourteen knots. Any three of their four boiler rooms, each containing four boilers, will give adequate propelling power, so that the disabling of a boiler or two will not in any way retard the ship's speed. Governors on the engines hold them absolutely safe. The preparations that are being made to care for both passengers and freight are extended to the smallest details. All the state-rooms of the boats will be on the outside, and will be perfectly ventilated. The air will be thoroughly cooled in summer and heated in winter. The furnishings of the parts of the boats occupied by the passengers will rank with those of the fast Atlantic passenger ships. Twenty-five miles of electric wiring will furnish all the power used except that of the main engines, as well as the lighting. There are thirty-three miles of temporary wiring in the hulls now. Refrigerating machinery will make it possible to deliver fruit in Japan or Hong Kong in the condition it was in when it was shipped. The ugly, black, noisy hulls on the ways at Groton, pounded and torn by a thousand workmen, will grow up into things of majestic beauty, of undaunted strength that will bear the strain of rough gales and running seas, throbbing forces which will help to blend old civilizations with the new, to make a path to new progress for each.

It was something like this that a burly shipbuilder from down East said, as we watched the army of men pour out of the seemingly empty ships that were silhouetted in bold outline against a brilliant yellow sunset.

"Building a ship is a good deal like building a big warehouse, isn't it?"

"Well, 'tis and 'taint. Ye see, a ship's got a heart, and ye've got to make her so's she'll be happy. 'Course, some ships has more heart than others and some has less. These ones will grow up, quiet-like, understand, and then go kitin' out into the world to do things. And they'll do 'em but, Lord, they won't hev as much heart as my old dory. They'll be too high'n'mighty ambitious. Byme bye they'll get ther noses punched in on a rock er some other boat'll beat 'em, and they'll wish they was back in the country. Then they'll be better craft."

"You think ships are pretty human, then?"

"Jes' so. An' these is goin' to be strong an' nervy and mod'ritly good-natured."

INCIDENTS IN AMERICAN DIPLOMACY

EXPERIENCES OF READY-MADE AMERICAN DIPLOMATS AND MINISTERS IN THE COURTS OF EUROPE—BETTER STANDARDS OF SALARY AND EFFICIENCY NECESSARY

BY

CHALMERS ROBERTS

SO many times have I seen eloquent petitions for more generous treatment of the diplomatic corps rejected, ignored with practically no consideration by the national lawmakers, I long since came to the conclusion that only a general Congressional excursion to the courts of the world would lead to any amendment. So long as their country remained a hermit nation, just so long could its foreign representation be neglected, even at the expense of national pride to those few of its citizens who ventured abroad. But there should now be no need to urge a transatlantic Congressional junket. Few good men have done more than the present Secretary of State to raise the level of the corps by appointing to lower positions young men of such birth and education as would fit them for the peculiar duties required. And as far as these go the pauper salary list does not act as a deterrent. A man who has the proper education and the proper breeding for diplomacy may generally be counted upon to have also sufficient means to eke out his salary so long as he has only secretarial duties to perform, if only he could be assured of a permanent career and could know that long years of training would not in the end be brought to waste by chances of political favor. Make the career a permanent one, just as the army and the navy are, and there will be no lack of capable men ready to prove there, as has been proved elsewhere, the breadth of American ability.

In any service money may be saved on underlings with some success. But there should never be any sense of stint with the men at the top. The slightest study of government will show unreserved reward in the end as the surest means of success. If you want good men you must pay for them. Just so long as the United States must depend for its proper representation to the other governments of the world upon the generosity of the few men willing and able financially to undertake the work, just so long will its charity-box diplomacy be a jest abroad and a shame at home.

There may be limits to the shame at home. As to the jest abroad there are none. In fact one has come to look for the current story in which the unfitness of some American diplomat furnishes amusement for his colleagues in almost every capital in Europe. It may do well to repeat a few here. They are for the most part good natured and are nothing to the discredit of the homely folk whom chance of political favor has suddenly raised to surroundings for which they are hopelessly unfitted.

For instance there is one story which must still amuse The Hague, of the wife of an American minister under a former administration, who on being granted an audience with the Queen Mother, then regent, looked up at a large portrait of Her Gracious Majesty, Wilhelmina, and said: "Your little girl, I suppose, Ma'am?" On receiving an affirmative answer she added to the horror as well as amusement of the court in waiting: "Well, I must say she's a mighty fine child." None of the many who used to laugh over this story, always told in an exaggerated American accent, ever doubted the good woman's kind heart.

There is another, even more exemplary of American kindness of heart and absolute lack of all the fine nothings of etiquette which are the very breath of courts and diplomatic life. The story concerns a former American minister to St. Petersburg at one of the elaborate and very formal receptions or levees which the Emperor and Empress give on New Year's day. All the diplomats stand in line in their order of precedence and Their Majesties walk

down the line to exchange greetings with each in turn. On this occasion the Empress, now the Dowager, was not present having just given birth to one of the younger Princesses. It seems also that the good wife of the American Minister was at home occupied with a similar domestic duty. The Emperor came down the line and asked after the health of each of the gentlemen present, at the same time exchanging the usual seasonable greetings. Then, as was also his custom, he asked of each what was the news from home. This always means in the diplomatic world: "How is my good brother the Emperor of Germany or what is the news from my dear sister, the Queen of Holland?" It is supposed that all of his questions were properly answered with pleasant information about his fellow rulers.

So when he came to the American he did ask the usual question: "I hope you have good news from home?" Of course he had, and our full-hearted representative could not keep it a secret. "Yes, thank Your Majesty, excellent news. It is a boy and weighs twelve pounds." It is needless to say how this perfectly natural answer smote the assembled corps hip and thigh. It is said that the widespread titter was scarcely decorously suppressed. But the good-natured man and father, even if he was Czar, pretended not to notice and said he was truly glad to hear it, and he hoped His Excellency would convey his heartiest congratulations to Madame Ministre. He then passed on to the next man in the line, extending his greetings. It seems that the ill-concealed disorder among his colleagues made no impression upon the American with the overflowing heart. He had forgotten something. Coming out of his place, he followed the Emperor and, tapping him on the shoulder, said: "I beg Your Majesty's pardon. I failed to inquire after the health of the Empress and the little Grand Duchess." The Emperor thanked him again with great kindness and assured him that both were going on as well as could be expected. From all accounts this last exchange of domesticities provoked the line to actual laughter. This was the one good story of the great winter capital for days, and was whispered at parties until it at last reached the ears of the recovering Empress. And with the kindness which always characterized her as well as her husband, at their next meeting, in a particularly audible voice, she thanked the American Minister for his kind inquiries after her health during her recent illness.

These stories might be duplicated almost without end. And it is useless to assume a democratic attitude and declare that they are only the triumphs of nature over artifice. All the good nature in the world does not compensate for ridicule. And so long as we continue to send men as courtiers abroad just so long will there be a crying need for their fitness and proper training. Let there be no misunderstanding on this point. The records which American diplomats have made in regard to actual international work accomplished is almost wholly a creditable one, certainly a wonderful testimonial to their native ability, coming into position as they do without the long technical training enjoyed by their colleagues. The intricate interweaving of social with political duties is one of the salient points in diplomatic life which Americans have almost necessarily ignored. Confident, and justly so, in the native strength of their public men, they have contended that the training given by a permanent diplomatic service was unnecessary. And in the record made everywhere by untrained diplomats, wherever they were called upon for really significant work, there is much to justify the contention. Of their unfitness for the social half of their duties no record is made. There is no one to tell of the actual agonies they have suffered and the slights they have undergone at foreign capitals wholly because of their ignorance of and indifference to all the thousand and one little courtesies which are the very essence of diplomacy. To my mind no more really pitiable situation exists than where, as is often the case abroad, some great strong-hearted American is faithfully serving his country, terribly sick for home, in the midst of a foreign atmosphere to which he cannot adapt himself and which in its turn cannot see or appreciate his sterling qualities under an unconventional demeanor. Save in the one capital where a sort of rebellious child's pride has moved us always to show what we could do with our best foot forward, and to send a long line of eminently fit men, the usual American representative abroad has been plucked up suddenly from some

small town, where no doubt he seemed a paragon of gentility, and set down in surroundings which made him look a boor, and that, too, at an age when old men cannot learn new graces. Here is where the minister as well as the secretary needs years of training. It is all very well for our staunch Republican governors to dismiss with a wave of the hand any such thing as a consideration of social fitness in the selection of public officials. Either they must do away with the whole thing or they must be brought to realize that manners are the very breath of diplomacy, and that the proper bow and the proper smile, to say nothing of the proper dinner, have often won in international contentions over justice and indisputable right.

If there were space here it could be easily shown that in the Behring Sea controversy at St. Petersburg between the United States and Great Britain the social prestige of the palatial British Embassy almost of itself carried the day as against the insignificant position in the great world of our unhoused and poorly paid minister. We lost enough then to have put our whole diplomatic corps forever into fitting domiciles, supplied with adequate compensation. It is hard to explain or defend the strength of social prestige. It is one of the things people prefer not to talk about. But who that knows the world at all fails to acknowledge its enormous power? The care which those countries oldest in diplomacy bestow upon this feature of their service is the best argument in its favor. No government of today, particularly no government of parliaments and disputed budgets, makes any unnecessary expenditures. If palaces for ambassadors, fitting salaries, fat perquisites and even large entertainment funds did not pay they would not exist. And the sooner we, as a nation, see fit to profit by the fruits of this experience the better.

If losses have not induced us to see the necessity of better caring for this too long neglected service, what we have gained through their unassisted ability should move us in gratitude to return to them some of the profits of their labors. It could be easily shown, for instance, how Charles Francis Adams alone in preventing a great war saved us from an expense great enough to have fittingly established a corps in perpetuity. If in any case, and there have been several recently which are yet part of unrevealed history, our diplomatists succeeded in averting war for one day, they earned enough to support the whole service in fitting style for a year. So badly do we need fit men, fitly paid, and fit houses for them to live in, that few travelers can return home untouched by this crying necessity. The houses and salaries can be instantly obtained once the generosity of Congress is aroused. The men must be trained in a permanent service. No one expects volunteer soldiers or sailors to equal trained regulars in any combat, and as far as the army and navy are concerned this fact has been finally established at Washington. But in seeming ignorance of the fact that the most frequent battlefields of today are the chancellories, the foreign offices, the drawing-rooms of the world's capitals, we leave our interests there wholly in the hands of raw recruits. The wonder of it is that we come out as well as we do.

It is safe to say that wherever the United States is decently represented abroad it is wholly due to the generosity of its ministers and ambassadors. For their posts remain everywhere the most poorly paid. There is one ambassador (at Rome) whose whole salary is less than the table money allowance given to several of his colleagues. They live there, as elsewhere, in great establishments belonging to their Governments and their salaries are twice and three times as large as the American's. It may be difficult to convince the average politician financier in Washington of the necessity for allowing greater salaries to officials whose duties are confessedly to a great extent social. Only after a personal visit to the various capitals is it possible to understand the keen humiliation of the citizen of a great nation when he sees the personal representative of that greatness obscure and insignificant only because of public parsimony. And as fortunate as we have been in the generous determination of our diplomats to bear personally the burden of proper representation, there are frequently occasions when the poor minister has to live upon his salary and to uphold his position as best he can. Not long ago I was in a capital where the American minister lived over a grocery shop and for lack of servants used to call out of the upper windows directing visitors to put their

cards under the doors. To the democratic point of view at home this may be amusing rather than humiliating. But everywhere abroad nations popularly are measured by their diplomatic representation. In Constantinople, where for instance no one will suggest that the American has little to do and where assuredly it is necessary to impress the Levantine mind with show, the United States Legation cannot for an instant compete with that of Holland, Sweden or Montenegro. I know that in London and in Paris at this time the ambassadorial salary does not pay house rent.

American people have had so small a concern with diplomacy heretofore that they know little about it, are very apt to mix up consulates with legations and wholly to forget that an ambassador in foreign eyes is the incarnation of national sovereignty. When one of these from the United States enters a room it is in every respect just as if Mr. Roosevelt were present. The same deference and respect must be shown him. He is accredited directly to the head of the Government not to the Minister for Foreign Affairs, and has the right always to demand an audience with the head of state, be he Emperor or President. With these privileges go not only the pride but the responsibility of proper appearances. Now at the White House itself the President lives simply enough. A democratic people understand it and those who visit them understand it also from the nature of its surroundings. But take the Executive Mansion and put it down with its interior life just as it is in any European capital. Why, the minister from Montenegro at Constantinople lives in a bigger house in better style. So either the American diplomat personally pays to see his country fitly represented or hides in the background conscious that the majority of people about him are measuring his country by his own insignificance. For the best paid representatives receive scarcely more than a third as much as the President. As they have to live at least in equal state they might at least have half the sum of his salary.

If Congress cannot be prevailed upon to follow the sensible plan of buying houses at all of the principal embassies and legations at least a step to this end would be a proper allowance for rent and entertainment. In some capitals, Berlin for instance, it is particularly difficult to set up a transient establishment. There are very few residences available and at the same time within the means of a poorly paid representative. The Germans seem to have an innate prejudice against giving out their Lares and Penates for hire; in other words furnished homes are practically impossible. Therefore the newly arriving official, who can never be sure of the tenure of his office, must not only find a dignified and not too expensive residence, but he must go to the cost of furnishing it. He knows that this expensive proceeding is also of a temporary nature and that at the end of four years at most he must expect to sacrifice all of his belongings or double their cost by taking them home. Unless a man be very wealthy the whole is a difficult undertaking. It has been the ruin of many. Everyone remembers how this very expense actually threw the estate of the lamented Bayard Taylor into bankruptcy. He died so soon after establishing himself in Berlin that he had not been able to pay off the first part of the debt it entailed.

If there were houses belonging to the Government, furnishings fitted to the house could at least be passed on from one representative to another. As it now is the furniture which suits the home of one may be wholly unfitted to that of his successor. No matter how small the house owned by the Government it would be preferable in many ways. In the first place the representative would be freed from all personal responsibility in the matter and would not be compelled to live beyond his means because of the state kept by his predecessor. Of much more importance—the home of the Government's representation would then be permanent and people would know where to find it. Ask any little boy in a Berlin street where the British or the French Embassy is and he can tell you. These nations are great ones to his mind, to the mind of his father and his mother, because of the object lesson of fitting embassies. But none of them will know anything about the American Embassy; they have never heard of it. In fact I once asked a man in the streets of Rome this very question. He said: "I do not think the Americans have such things as ambassadors. They have no kings in America."

Perhaps actual experience accentuates one's interest in the matter, but I would go the whole length of advocating not only proper

pay and permanent residences but even uniforms and a full demand for all titular distinction. It was a very pretty speech of a former American minister to Constantinople, when some one commented upon the simple dark blue uniform of the Sultan to say that to His Majesty and to himself (in plain evening clothes) belonged the distinction of being the only two men in the great gathering who depended upon their personal appearance alone for dignity. There are so many strong arguments in favor of some sort of uniform for the corps that speeches like this should not be permitted to prejudice the case. Until you have paraded about the streets of some foreign city in your evening clothes in bright daylight on some official occasion you cannot half appreciate the situation. Until you have seen your ambassador in a great Jubilee procession taken for a footman you cannot be expected to have a strong prejudice on the subject. Even the French Republic, whose officials do not seem to object to evening clothes in the day time, gives a uniform to its diplomatists. Let it be as simple as you please, give them a plain semi-military uniform or dress them after the simple pattern of George Washington. Do anything to remove them from the ranks of the servants, where by their clothes on any state occasion abroad they now seem to belong.

Again, be sure to give and to demand for them every iota of titular respect due them. For instance, in the Berlin great world, which not only adopts but insists upon such ridiculous dignities as Mrs. Brevet Field Marshal General von Pumpernickel or Mrs. Third Under Secretary of the Imperial Chancellory Schmidt, I earnestly hope that the worthy American there is spoken of as His Excellency the Honorable Professor Dr. White, Chevalier of the Legion of Honor, etc. Many people in America will look upon this as a very undemocratic sentiment. I can remember when the very word Excellency seemed to halt on my tongue. But the briefest of experiences in diplomacy cured me of that. And there is one good woman who for a time presided over this very Berlin mission who won my eternal gratitude for standing up for her titular dignity. Rumors had reached us of various deficiencies in the proper social standing of the embassy at that time. The ambassador was admitted to be able, but both he and his family were characterized under that fatal social anathema—"impossible." They had come from some small town in the West and we had seen so much of the same sort of thing elsewhere as regretfully to believe what we heard. But as we soon afterwards learned, all the imperturbable dignity and self-possession of Brother Jonathan were there. The German great world was at Homburg. Here as well as in Berlin the American and his family suffered innumerable slights. One night at a great party royalty was present and was bestowing its condescending attention upon the diplomatists present. One haughty Princess, after addressing with the proper title all the other ladies present, turned to the American ambassadress and said: "I hope you and your family are well, Madame?"

This was not the first time she had been so treated and the little Yankee woman's wrath overflowed. She did not hesitate in the crowded company promptly to rebuke the Princess by ignoring her question and replying to the "Madame" part with a loud, firm "Excellenza bitte!" (Excellency, if you please.) Of course her action was the gossip of the hour, babbled over springs in the morning or tattled over tea cups in the afternoon. But after that people were very careful to give her full respect. And in demanding her just rights and rebuking a slight to herself and to her country that little woman fully made up for whatever she may have lacked in social fitness.

Personally I was cured of my American distaste for title in a very simple way and one which fully illustrates the foreign view of the subject. I had occasion to go on official duty to a capital where I was on terms of close friendship with the minister. I knew him for a very able, even a brilliant man at home. But there he was quite lost in the intricacies of a strange social life, and his behavior was unconventional, to say the least. I called him "General," the title by which I had known him at home, and often had occasion to defend him from the little jeers of people who could not appreciate the sterling character under what was to them an unusual exterior. On one of these occasions I was answered by a young secretary: "Oh, it is all very well for you to defend him; he's your countryman. But I don't think you yourself have very much respect for your

funny old minister; you don't even call him Excellency." Forever afterwards I took pains everywhere to speak out the title as loudly as I could and to insist upon others doing likewise.

In the ante-room of the chancellory of the American Embassy in Paris what seems to be an old, old parchment letter hangs framed. Nearly every visitor reads it, and those who do not notice closely take it for an original. Only a clever photograph, it calls to mind the first diplomatic mission ever sent out by the brave little Government formed at Philadelphia in 1776. It is directed to the Count de Vergennes, Minister for Foreign Affairs, and signed by Benjamin Franklin, Silas Doane and Arthur Lee. The original in Franklin's handwriting is in the archives of the French Ministry for Foreign Affairs. What a far cry from that day to this! The head of that modest embassy was to make for himself a unique place in the history of France. But if this first plain envoy in his Quaker homespun made a name for himself at a brilliant court and in a brilliant world, he set an example which has embarrassed his successors even to the present day. Few of them can be Franklins. Fewer still could make homespun garb respected and admired in a diplomatic world of gold lace and jewelled swords. The little Government at Philadelphia has grown since those days. Yet whenever an effort is made to enlarge and endow its diplomatic representation one always hears from objectors the ineradicable record of that suit of Quaker gray. Hence the Government continues to hope for Franklins, and his successors are thrown pitilessly upon their own resources to make good the deficiency.

THE HOPES OF PAN-AMERICANISM

THE BROAD-MINDED INSTRUCTIONS OF OUR GOVERNMENT TO ITS DELEGATES TO THE CONFERENCE AT MEXICO — OUR ATTITUDE TO OTHER AMERICAN STATES — THE WORK OF THE CONFERENCE

BY

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WHEN the director of the Bureau of American Republics, in Washington, made the suggestion which led to the Pan-American Conference now in session in Mexico, he found warm support from President William McKinley. The old "Blaine idea" held in essence only the betterment of trade relations among the countries of the western hemisphere. But the mere reciprocity grew and broadened in Mr. McKinley's mind into a hope and expectation of far greater things. His conception of Pan-Americanism involved much more than the mere fostering of international commerce. He aimed at the establishment of relations among the republics of the two Americas which should go far toward the prevention of armed strife. He aimed at the upbuilding of a unity of interest which should join hands from the St. Lawrence to the Straits of Magellan in a common movement. This was the McKinley view of a possible Pan-Americanism, and it is the view of most thoughtful citizens of the United States. It has, too, many and able supporters in the countries of Central and South America.

This is the ideal. A "closer Pan-Americanism" is also in the minds of the delegates to this Conference. A brief talk with them as you meet them now and then leaves you with the belief that great things are to be accomplished here. But when specific action comes there begins to be a vagueness that somehow falls short of satisfaction. Both dreamers and practical men have come to the Pan-American Conference. Two brilliant dreams have found much favor: arbitration and reciprocity. These recur in varying forms, sometimes leaning

more and sometimes less to the practical. Meantime the practical men—our own delegates among the best of them—are striving for those apparently minor things which will be the beginnings of a "closer Pan Americanism" that may develop into something more nearly approximating the ideals of the dreamers.

Enough matter has been submitted to the delegates this first month of the Conference to show what the uppermost thought and hope of most of the delegations is. First of all is the hope of some plan which will lead to increased resort to arbitration of international differences, if indeed it does not lead to a general adoption of that peaceful plan. Linked closely with this is the wish for the establishment of a court of claims, or international tribunal of equity as the Americans prefer to call it, which shall determine the claims of citizens of one country against the Government of another. In the minds of the delegates from Mexico this subject is of such a broad possibility that they propose that the court to be established shall have power to hear and determine claims of nation against nation. That is little else than arbitration pure and simple.

Only one definite plan for a court of arbitration has been proposed—that of the Mexicans. Two schemes for a court of claims have been submitted—one by the Mexicans and the other nominally by Guatemala, although it was written by the delegate from Haiti. There seems now to be hope that the committee will agree on some general plan. What the committee on arbitration will do no one can predict. In one respect, however, this committee has the advantage of every other. Its report will be the report of the conference. It is composed of one member from each delegation, but all the delegates have the right to be present at its meetings and to take part in the discussion, although they may not vote. Many of the delegations consist of only one member, who is of course the member of this committee. Whatever the committee reports will have been practically adopted by the Conference in its adoption by the committee. There remains the matter of reciprocity.

These three subjects are the talk of the Conference and, on the surface at least, its hope. But even the most enthusiastic of the believers in arbitration will admit in private that they have little expectation that the Conference will agree on any substantial measure of great practical advantage.

In other ways, however, very much can be done, and the delegates are already at work earnestly and enthusiastically to produce substantial results. Foremost among these is the chairman of the United States delegation. He is chairman of the committee on completing the intercontinental railway which received such an impetus from the first Conference, held in Washington eleven years ago. Already this committee is receiving reports from the countries directly interested as to the amount of railroad mileage in each, and the construction necessary to complete their share of the connecting links, with the conditions to be met and the encouragement in the way of subsidies or other assistance that will be given. This committee does not concern itself now with the difficult problem of the administration of this great system after it shall be completed. The first thing is to get all the links built. Here is a practical scheme, the advantage of which is plain. Every international railroad connection is not only an additional stimulant of international trade; it is an additional hostage to peace. It is an additional factor in the establishment of a community of interest which is one of the greatest safeguards against international rupture. It lies within the province of this committee to render vast assistance to this great project. As no individual or corporation could do, it can interest governments and induce liberal aid to the private enterprises.

The United States is also directly represented by its delegates on the committees on Pan-American Banking and Monetary Exchange, Future Pan-American Conferences, Commerce and Reciprocity, Resources and Statistics, Water Transportation, Pan-American Sanitation, an Inter-oceanic Canal, a Pan-American Tribunal of Equity, and the Reorganization of the Bureau of American Republics and General Welfare. Of the six committees on which the United States does not have representation only one, that of Agriculture and Industry, is of great importance. The committees on Commerce and Reciprocity and Resources and Statistics are already compiling a mass of information which cannot fail to be of great benefit to our mer-

chants and manufacturers. The committee on Water Transportation will endeavor to make a practical recommendation to the nations most concerned, which will result in increased facilities for maritime traffic. Pan-American Sanitation means the effort to agree on a general system of sanitary regulation which will do away with the vexatious delays and losses of quarantine which occasionally so greatly obstruct and derange the channels of trade. The Bureau of American Republics, if it is reorganized on the lines on which the committee charged with that work is now proceeding, will become a great executive office for all the American republics, of incalculable service to the merchants and business men of every country represented. Even the committee of General Welfare has a wide field of usefulness. Under that broad head it is preparing to compile a great dictionary of all the local commercial terms used in each of the nations of the two Americas. Efforts will be made to secure uniformity of port regulations and dues and, wherever it is possible, to have a common system.

In other words, anything which will facilitate trade between nations is receiving the consideration and helpful suggestion of some of the committees of the Conference. And as an additional safeguard of the future, the committee on Future Conferences will endeavor to have them established as a regular thing, to meet once every five years.

But all these matters are of minor importance and yield precedence to the great subjects of arbitration, reciprocity and the establishment of a court of claims. Yet everybody recognizes that these apparently lesser subjects are the things which offer hope of practical solution and agreement. The accomplishment of each one is but a step in the direction of the greater accomplishment.

In the effort to secure these results the position of the United States is very delicate. Our opponents throughout the southern nations have long been suspicious of us. The territorial expansion which resulted from the war with Spain has given them a new stock of arguments. Here in Mexico the coming of the delegates has inspired the Clericals to redoubled efforts, which do not stop at misconstruction and misrepresentation. The representatives of some of the Central and South American nations are watching us with critical but not unfriendly eyes. In a situation where there has been such pronounced willingness to look behind the action for the motive of it, it becomes the delegates of the United States to proceed with caution and skill. The declaration of the chairman of our delegation that we were not here for preferment or place; that we wanted no further territory, but were firm for the Monroe Doctrine and the preservation of the territorial integrity of all the western nations, the expansion of commercial privileges and the increase of cordiality and good will, was received with hearty assent. It is easy to imply, and the opponents of the United States have not been slow to do so, that we are showing the friendly disposition to the weaker nations of the western hemisphere simply because we want their markets. They do not stop to consider that the United States has succeeded fairly well so far without any great preponderance of Central or South American trade, or that the expansion of trade must always bring its reciprocal advantages. It is apparent, therefore, that while the immediate interest of the United States is for the expansion of its trade with the other republics, its chief concern is for the preservation of the political system which underlies both their existence and our own.

The delegates of the United States were told that our Government desires that "all the American republics should enjoy in full measure the blessings of perfect freedom under just laws, each sovereign community pursuing its own course without external restraint or interference. To this condition," continued the letter of instruction sent to each delegate, "the security and peace of our neighbors will materially contribute. Every failure on their part to maintain social order, every economic distress that might give rise to domestic disorder, every discord between them which could impede them in the fulfilment of their duties, menace their stability or bring on them the calamity of foreign interference, would be a misfortune for us. Therefore, it should be the effort of this commission to impress upon the republics of Central and South America that we desire, above all else, their material prosperity and political security." Having thus declared in general terms the policy and attitude to be maintained by the United States delegates, the instructions proceeded to take up specific matters. The delegates were

warned to take no leadership, but to endeavor to secure the introduction of schemes of action by the Latin-American delegations. The best method to follow was that of coöperation with the plans of others, to help along whatever could be supported, to have an interest in everything, to be careful not to give offense and not to become vigorous partisans.

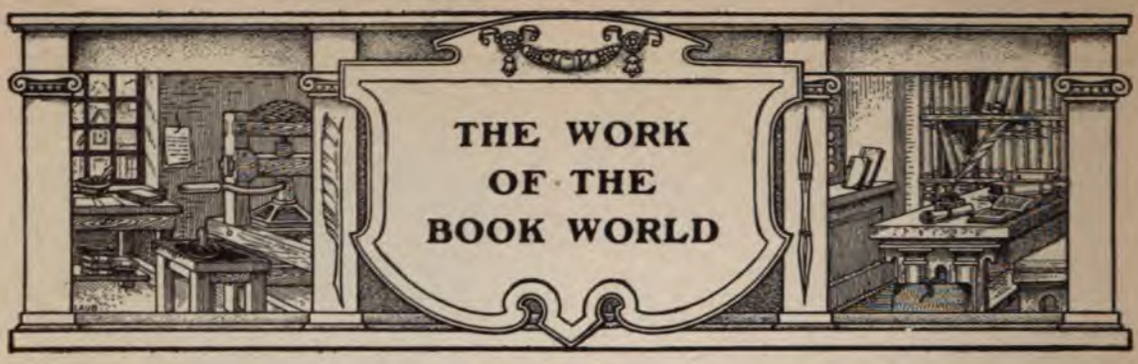
The delegates were cautioned against being drawn into political disputes between the representatives of other countries, but wherever possible they were to impress upon their colleagues from the Central and South American States the deep solicitude of the United States for peace and their territorial integrity. It is this question of territorial integrity that furnishes the great bugbear which the opponents of the United States are forever bringing forward to frighten the weaker nations to the south of us. It was on this subject that Mr. Roosevelt delivered such a clear and straightforward declaration of the policy of the United States when he addressed the representatives of the Central and South American nations gathered at Buffalo last May. He found occasion later, at Minneapolis, to repeat and amplify his Buffalo speech. And now his instructions to the delegates here reiterate that declaration. In the fulfilment of those instructions former Senator Davis, of West Virginia, the chairman of our delegation, made an effective speech in the Conference. All these things have had their good effect.

The instructions go yet a little further. Not only are the delegates informed that there is no desire on the part of the United States for territorial aggrandizement at the expense of any other nation on the western hemisphere, but they are instructed to cause it to be understood generally that the United States will condemn seriously any attempt to destroy the territorial integrity of any of the sister nations of the New World, or any conduct the tendency of which would be to provoke such an attempt. They are warned that they are not authorized to enter into any specific engagement or agreement on such subjects, but they are to spread the information that the United States will oppose any forcible alteration of boundaries, whether the attempt proceed from the Old World or the New. This is a step in advance of any previous interpretation of the Monroe Doctrine. It is in fact the declaration of a new principle, and, while it may meet some little opposition on the part of those supersensitive citizens of the southern countries who feel that we are relying on our great strength to patronize them, there is no doubt that among those who have the real interests of their countries at heart the announcement is received with hearty welcome. The fact that there is no solid objection to it is found in the willingness of so many of them to accept a scheme of compulsory arbitration which, if adopted by all the nations represented in this conference, would soon resolve itself into the establishment of the United States in the position of the watchdog of the whole western world, prepared at all times to compel all others to resort to arbitration for the settlement of their international difficulties, but beyond the pale of compulsion itself.

The instructions aptly say that nothing is of greater importance than that it should be thoroughly understood that the United States is the friend of all the Latin-American republics and the enemy of none. We want the largest mutuality of interest without unfair advantage for anyone. As our influence spreads to the south it will be a pacific and not a hostile influence.

Thus by its action and its instruction the United States has demonstrated to the southern nations its friendly attitude and interest. It cannot be foretold when this is written what will be the result. We are for the broad principle of arbitration. We believe that it should be voluntary and that the choice of arbitrators should be left to mutual consent rather than that a court should be organized from which the arbitrators for any specific case should be chosen.

The Conference is remarkable for the character of the delegations which compose it. Every republic in the two Americas is represented, and all but one by their own citizens. That one, Santo Domingo, has accredited the representative from Ecuador to act for her. There has been a general fear that the long pending controversy between Peru and Chile over the ownership of the provinces of Tacna and Arica in some manner would be thrust upon the Conference. But almost at the outset Peru gave what amounted almost to a public pledge that no action of hers should precipitate this matter.



A SHORT GUIDE TO NEW BOOKS

Heroines of Fiction

There is only one excuse for such random gossip about books and the women in books as Mr. WILLIAM DEAN HOWELLS packs into these two suggestive volumes—the hope of firing readers to read or re-read the books and become acquainted, or renew their acquaintance, with the heroines. Unquestionably Mr. Howells had the hope; certainly the book fulfills it. We can quarrel as we please with Mr. Howells' idiosyncrasies, and we certainly do quarrel with them: as he dissects the feminine characters of Richardson, Goldsmith, Jane Austen, Scott, Hawthorne, Thackeray and a dozen other authors, from *Clarissa Harlowe* down to *Margery Daw*, we are as often amazed at his seeming ineptitude as delighted with his happy discernment. But since we at once topple over a pile of "puerile romances" to get at our Scott or our Thackeray to read a little of the latter's "twaddle" or wade through a chapter or two of the former's "shapeless, tautological, heavy, infirm, wandering, melodramatic and over-literary" style, even if only to confirm our disagreement with Mr. Howells, we must confess the stimulation, if not the convincingness, of Mr Howells' criticism. The book, then, is a series of pleasantly discursive chats on women in English fiction: delightfully suggestive, individual, and capable of giving an invigorating shock to any lover of the novelists. (Harper. $3.75 net.)

By Bread Alone

Mr. I. K. FRIEDMAN has produced a finely wrought study of the life of the toilers in a great Chicago steel mill. The plot centres around the efforts of Blair Carrhart, a young University man possessed of lofty ideals, to ameliorate the condition of the foreign steel-workers. Against a magnificent background of machinery in motion there is outlined a cruel story of oppression, of a strike that failed, an anarchist uprising, a complicated love affair that ends happily and the multitudinous hopes and fears, joys, diversions and disappointments of the thousands of Poles in the service of the giant steel Moloch. It is a carefuly modeled but grimly realistic story, a serious, powerful arraignment of the callousness of certain great industrial corporations. (McClure, Phillips. $1.50.)

The Velvet Glove

Mr. HENRY SETON MERRIMAN'S latest novel gives an effect of definite accomplishment. Juanita is a charming, ingenuous young girl, placed in a convent, and possessed of a large fortune. To save it and to shield her from certain designing persons, her father's old friends, Marcos and his father, assist her to fly from the convent and marry Marcos as a matter of form only. The story shows how her love for Marcos is awakened afterward. He is a hero of few words, much courage, and fine feeling—a truly admirable creation. It is worth while to read a book that contains a hero of the first lustre. (Dodd, Mead. $1.50.)

The Firebrand

Rollo Blair, the hero of Mr. S. R. CROCKETT'S new romance, matches his keen Scotch wits and his long blade, Killiekrankie, against each party in turn, as it suits his immediate purpose, in the Carlist wars in Spain. He plots with a monk to kidnap the queen, associates himself with a Spanish outlaw, secures the queen's person after defending her in a night attack of gypsies on the palace, walks immune through a plague, suffers torture on the rack, and finally comes to fortune, with a charming Spanish girl at his side. The tale is a spirited romance with plenty of action in it and no lack of pretty love-making. (McClure, Phillips. $1.50.)

Our National Parks

If Mr. JOHN MUIR'S heart turns here, in this appreciation of the marvelous natural parks of the West, chiefly to the wonders of the Yosemite Valley no fault can be found with his instinct. Of all the garden spots of the world to an American—who by tradition loves wild country—the Yosemite is the fairest. John Muir knows it better than most and loves it better than most. His easy, flexible, enthusiastic revelation of its stupendous natural beauties and

its wealth of little, curious fascinations of stream and tree, flower and bird and animal awakes in one a haunting desire to see as far as possible, with his keenness of sight, the other national parks he so spiritedly tells of, and then migrate definitively to the counties of Tuolumne and Mariposa. (Houghton, Mifflin. $1.75 net.)

George Washington

Through a power of selection for which we may be grateful, Mr. NORMAN HAPGOOD has brought the man Washington near to us, and at the same time spared us our hero. In these pages he lives less as the tranquil sage, or man of affairs, and more as the passionate and fearless fighter conquering self, desiring to whip his enemies, yet generous and tender. The integrity of his republicanism is set ever before us, yet to the admiration always inspired by that is added a warmer feeling. He spoke of the army as "my flock," and came so near to hating the enemy that he suggested they be made to pay in coin under the contract instead of in paper "in order to administer some relief to our unfortunate officers and men who are in captivity." It is by such personal matter that Mr. Hapgood has very well justified his undertaking and made a useful biography. (Macmillan. $2.00.)

A History of English Romanticism in the Nineteenth Century

This volume by Professor HENRY A. BEERS is a sequel to his "Romanticism in the Eighteenth Century." It deals with Sir Walter Scott, "the King of the Romantics," and after two chapters on Coleridge and Keats, and some of their fellow-craftsmen, discusses the romantic movement in Germany and France, with a chapter on the Pre-Raphaelites and another on Tendencies and Results. The author gives with great fairness the result of examination and discussion by two generations of critics, both English and foreign. He makes especially good use of his authorities in chapters on German and French Romantics. He is exceedingly impersonal; but after a temporary fear lest the book be somewhat dry, the reader finds it very entertaining and instructive. (Holt. $1.75 net.)

Careers of Danger and Daring

This is very good journalism. Mr. CLEVELAND MOFFETT has poked into many strenuous callings and in a concrete dashing style he tells here how steeple-climbers, divers, wild beast tamers, locomotive engineers and other work-a-day heroes earn their daily bread. (Century. $1.80.)

Back to the Soil

Unusually suggestive is Mr. BRADLEY GILMAN's remedy for slum evils in cities. He tells the story—imaginative—of a group of earnest philanthropists who founded a rural colony for city failures, and made the colony a social success by laying out the farms in the form of segments of a circle, with the houses clustered at the centre, and a financial success by introducing a multiplicity of minor industries. Fundamentally, however, Circle City lives because rich men furnish the capital to start it and to keep it going. They also supervise. Despite the Rev. E. E. Hale's disclaimer the book is Utopian. It is, however, stimulating. (L. C. Page. $1.25.)

Animals of the Past

This book about fossils and skeletons has a very living interest because Dr. FREDERIC A. LUCAS has a sense of humor and other forms of intelligence not always found in company with a scientific knowledge so profound as his. While every fact has been secured through research, all the tedium of the process is left out of the book. The earliest vertebrates, sea-monsters and birds, the dinosaurs, the mammoth and the mastodon and many other animals are illustrated from careful drawings, with details in smaller drawings. (McClure, Phillips. $2.00 net.)

Washington and Other American Addresses

These addresses of Mr. FREDERIC HARRISON are the clear-cut opinions of an able and fair-minded Englishman much in sympathy with our national ideal, who places special emphasis upon integrity and wisdom as exemplified in Washington and William of Orange, rather than upon brilliant statesmanship, as the chief elements of a successful Government. Washington, Lincoln, Cromwell, King Alfred and "The Nineteenth Century" are among the subjects treated. The three ablest and most interesting chapters in the book are perhaps "The Dutch Republic," "Republicanism and Democracy" and "Personal Reminiscences." Mr. Harrison's wide acquaintance with the world for the past forty years makes the last delightfully informing. (Macmillan. $1.75.)

American Diplomatic Questions

Mr. JOHN B. HENDERSON, JR.'s, essays deal with the Bering Sea troubles, the Interoceanic Canal problem, the relations between the United States and Samoa, the Monroe Doctrine and the Northeast Coast fisheries. They are historical accounts, pure and simple, of the gradual development of the questions, free from criticism and presenting many valuable citations from original documents. They form a clear, straightforward, interesting exposition of facts. (Macmillan. $3.50 net.)

The Secret Orchard

The last of the Stuarts—a fascinating figure of a man, a French duke married to a beautiful American—is the centre of the complication in this novel by AGNES and EGERTON CASTLE. In a luxurious country house in modern France the consequences of the duke's liaison with a girl who later proves to be

his wife's ward tragically unfold themselves. From the powerful domesticity of the first scene to the fatal climax the plot moves with grim inevitableness. It is a story distinguished for vivid characterization and strong workmanship. (Stokes. $1.50.)

The Ballet Dancer

Two tragic stories full of wonderful drawing of tormented human nature are contained in this latest translation from MATILDE SERAO. Both are stories of Neapolitan life—one of the wretched struggle of a ballet dancer, the other of a parricide's affection for a little child. The pathos of the second tale is overwhelming. (Harper. $1.50.)

Some Women I Have Known

MAARTEN MAARTENS studies here a series of women—German, English, Dutch, French—each the heroine of an episode, tragic, comic, domestic, sentimental, which exhibits her character and personality. Though ranging in quality from fine literary art to sententious sketching, the book never lacks interest. (Appleton. $1.50.)

International Law

Written in the form of a text-book by Dr. GEORGE GRAFTON WILSON and Dr. GEORGE FOX TUCKER, this volume is a terse, clear and accurate summary of international law. It cites both authorities and cases. It covers a wide field in a manner that makes it a valuable companion to the other authoritative works on the subject. It treats a number of questions of contemporary interest. (Silver, Burdett. $1.75.)

The Million

DOROTHEA GERARD (Madame de Longgarde) has given us a well-written book, with an excellent plot skilfully worked out. A materialistic notary in Galicia saves a million, and through ambition thwarts his daughter Romana's love for Felix by intercepting a letter. She makes a loveless marriage; Felix marries her friend Aniela. The notary's deception is discovered by Felix, who still loves Romana, but he refuses to leave his wife and child. Romana then enters upon a series of tragic experiences and retires to a convent at the end. The book, while sombre in tone, is full of the interest of human life. (Dodd, Mead. $1.50.)

The Tempting of Father Anthony

Mr. GEORGE HORTON'S hero, the son of a Greek peasant priest, determines, after much reading of the life of Saint Anthony, to become a saint. Imitating Saint Anthony, he fares forth as a monk with a reputation for remarkable holiness to fight the devil. Thus far the story is idyllic. But the bare arms of a peasant girl result in a downfall that brings the tale to a sordid, realistic conclusion. The story possesses considerable vigor. (McClurg. $1.25.)

A Lighthouse Village

In these brief annals of a quiet New England coast neighborhood Mrs. LOUISE LYNDON SIBLEY allows her characters to speak for themselves. They tell their own stories, principally in dialogue and exclusively in dialect, and the little tragedies, comedies and romances thus disclosed are truthful and touching. (Houghton, Mifflin. $1.25.)

Twentieth Century Text-Books: Commercial Geography Astronomy

Mr. CYRUS C. ADAMS' "Text-Book of Commercial Geography" is a lucid explanation, emphasized by carefully chosen statistical tables, good maps and excellent photographs, of commercial conditions the world over. It is a commendable book for high schools and elementary college courses. Equally good is the "Astronomy." Professor GEORGE C. COMSTOCK, the writer, is the director of the Washburn Observatory and an astronomical authority of high repute. His clear and interesting exposition, illuminated by admirable diagrams and photographs, is of value not only as a text-book, but also as a popular manual for those desiring a thorough understanding of the subject rather than a superficial glance at it. (Appleton. $1.30 each.)

Nature Books

Mr. ERNEST SETON-THOMPSON'S "Lives of the Hunted" (Scribner; $2.00) is a companion volume to "Wild Animals I Have Known." The bookmaking is excellent, the illustrations well executed and suggestive and the stories full of dramatic intensity. Each of the animal heroes or heroines is sure of any reader's sympathetic interest. Every bookshelf that contains "Wild Animals" should contain "Lives of the Hunted." Mr. WILLIAM J. LONG presents two illustrated books—"Birds of the Air" and "Beasts of the Field" (Ginn; $1.75 each)—in which the observer appears as well as the wild things. The books are fascinating records of patient observation in the woods and fields. Mr. DALLAS LORE SHARP ventures less far afield than some of his fellow-observers, but with literary sensibility added to his patient, loving study he has shown in "Wild Life Near Home" (Century; $2.00 net) how much delight can be found in becoming acquainted with the beast-folk and bird-folk just outside our doors.

Memories of a Musical Life

Mr. WILLIAM MASON'S memoirs cover the whole period of American musical culture. Since the first symphony orchestra here, organized in great measure by Mr. Mason's father, our musical life has owed much to his family. Mr. Mason himself has known all the great European musicians of the last half-century, and here he records most charmingly his life in the musical family of Liszt. His estimates of performers are valuable, especially to

musicians; but we could wish that Mr. Mason had given us more of the personal life of the men he knew. (Century. $2.00 net.)

Marietta

Mr. F. MARION CRAWFORD has written a pretty story woven with the traditions of old-time Venice. It is of the sort that begins with "There was once upon a time." Picturesque melodrama delays the culmination of sweet romance long enough to make a book. It is of a piece with the author's earlier Italian stories and is, of course, of good workmanship. (Macmillan. $1.50.)

Count Hannibal

Mr. STANLEY WEYMAN'S picture of Paris at the time of the massacre of St. Bartholomew is vivid. His hero is an interesting character whose love softens a hard exterior and adds the grace of a gentleman to the strength of the soldier. The heroine is one of the most satisfactory women of later-day fiction. Mr. Weyman is of the few who make historical romance live with reality. (Longmans. $1.50.)

The Benefactress

This story of an English girl who inherits a German estate, and who attempts to develop a new kind of charity, is worthy of the author of "Elizabeth and Her German Garden." The romance is developed with rare grace. Each person and incident is so true, so human, that one lives rather than reads the story. (Macmillan. $1.50.)

Life on the Stage

CLARA MORRIS'S autobiography will give to many a new notion of work behind the footlights. The famous actress writes in a charmingly confidential fashion of many of the best-known actors of the last half-century. Few novels are as interesting as this story out of real life. (McClure, Phillips. $1.50.)

THE MONTH'S MOST POPULAR BOOKS

REPORTS from booksellers in St. Louis, Washington, Dallas, Pittsburg, Toronto, Rochester, Kansas City, Los Angeles, St. Paul, Cincinnati, Louisville, Detroit, Cleveland, Philadelphia, Boston and New York, and from librarians in Chicago, Buffalo, Minneapolis, Bridgeport, Los Angeles, Jersey City, Cincinnati, New York, Springfield, Brooklyn, Cleveland, Hartford, and Detroit combine into the following lists showing demands for books for the month ending December 1st:

BOOK-DEALERS' REPORTS

1. The Right of Way—Parker. (Harper.)
2. The Crisis—Churchill. (Macmillan.)
3. The Man from Glengarry—Connor. (Revell.)
4. The Eternal City—Caine. (Appleton.)
5. Kim—Kipling. (Doubleday, Page.)
6. Lazarre—Catherwood. (Bowen-Merrill.)
7. The Cavalier—Cable. (Scribner.)
8. Cardigan—Chambers. (Harper.)
9. Lives of the Hunted—Seton-Thompson. (Scribner.)
10. The Benefactress—Anon. (Macmillan.)
11. D'ri and I—Bacheller. (Lothrop.)
12. Blennerhassett—Pidgin. (Clark.)
13. The History of Sir Richard Calmady — Malet. (Dodd, Mead.)
14. Tristram of Blent—Hope. (McClure, Phillips.)
15. Tarry Thou Till I Come—Croly. (Funk & Wagnalls.)
16. Graustark—McCutcheon. (Stone.)
17. The Ruling Passion—Van Dyke. (Scribner.)
18. Circumstance—Mitchell. (Century.)
19. New Canterbury Tales—Hewlett. (Macmillan.)
20. The Portion of Labor—Wilkins. (Harper.)
21. The Secret Orchard—Castle. (Stokes.)
22. Up From Slavery—Washington. (Doubleday, Page.)
23. Warwick of the Knobs—Lloyd. (Dodd, Mead.)
24. The Red Chancellor—Magnay. (Brentano.)
25. The Making of a Marchioness—Burnett. (Stokes.)
26. Annie Deane—Slade. (Brentano.)
27. The Tory Lover—Jewett. (Houghton, Mifflin.)
28. A Dream of Empire—Venable. (Dodd, Mead.)
29. My Lady Peggy Goes to Town—Mathews. (Bowen-Merrill.)
30. Marietta—Crawford. (Macmillan.)

LIBRARIANS' REPORTS

1. The Crisis—Churchill. (Macmillan.)
2. The Right of Way—Parker. (Harper.)
3. The Eternal City—Caine. (Appleton.)
4. D'ri and I—Bacheller. (Lothrop.)
5. Cardigan—Chambers. (Harper.)
6. Blennerhassett—Pidgin. (Clark.)
7. A Sailor's Log—Evans. (Appleton.)
8. The Tribulations of a Princess—Anon. (Harper.)
9. Lazarre—Catherwood. (Bowen-Merrill.)
10. The Puppet Crown—McGrath. (Bowen-Merrill.)
11. The Cavalier—Cable. (Scribner.)
12. Up from Slavery—Washington. (Doubleday, Page.)
13. Kim—Kipling. (Doubleday, Page.)
14. Tarry Thou Till I Come—Croly. (Funk & Wagnalls.)
15. Life Everlasting—Fiske. (Houghton, Mifflin.)
16. Graustark—McCutcheon. (Stone.)
17. The Life of Phillips Brooks—Allen. (Dutton.)
18. The Helmet of Navarre—Runkle. (Century.)
19. Tristam of Blent—Hope. (McClure, Phillips.)
20. Truth Dexter—McCall. (Little, Brown.)
21. Circumstance—Mitchell. (Century.)
22. Lives of the Hunted—Seton-Thompson. (Scribner.)
23. The Life of R. L. Stevenson—Balfour. (Scribner.)
24. Alice of Old Vincennes—Thompson. (Bowen-Merrill.)
25. The Individual—Shaler. (Appleton.)
26. The History of Sir Richard Calmady — Malet. (Dodd, Mead.)
27. Eben Holden—Bacheller. (Lothrop.)
28. The Making of a Marchioness—Burnett. (Stokes.)
29. The Man from Glengarry—Connor. (Revell.)
30. The Riddle of the Universe—Haeckel. (Harper.)

IT has always been part of the American method to make new conditions and meet them, to force a passage and then hold the advantage gained rather than conservatively to carry out well-organized plans. In the fight for a new place in the world's markets the United States is waging the same guerilla-like warfare that characterized her struggle for independence, by companies, by squads, by individuals, learning better how to fight in each new skirmish. And the steadily-advancing forces show themselves both in picturesque incidents and in the annual record of our trade. A few years ago the United States was a centre of speculation. Today it is an investing country. We are holding foreign government bonds in our safe deposit boxes. Wall Street was a typically local market and has grown to a world-wide importance, second only to Lombard Street. The Government has had lately more gold than any country but one ever had, and we are exporting gold now at a time when we should naturally be importing it. Insurance companies are building big buildings and business abroad. American skyscrapers, street railways, bridges and locomotives are being put up in the far corners of the globe. Little articles in hardware and great ship-loads of wheat and corn are finding their way to every continent. Nearly every detail of our foreign trade is spreading daily into larger proportions, and the dealers are beginning to learn the elements of the great development yet to come. There are three forces hard at work to get new footholds for trade: the consuls, the exporters, and the manufacturers and Manufacturers' Association. The consuls help to develop the trade in their districts, the exporters are the specialists in foreign trade, and the manufacturers, who know best how to make goods and market them here, get whatever orders they can direct from abroad and hand over the rest of their foreign business to their agents, the exporters. The new shipping is more than a project; it is already on the ways. American civilization is being carried across the sea by Governors Taft, Wood and Hunt and their associates. It is an expansion along all lines of development. The marshaling of the forces has been slow and arduous. The advance should be swift, steady and sure.

AMERICAN MACHINERY MAKING SUGAR

THE largest sugar plantation in the world is in Cuba, and is completely equipped with modern American sugar machinery. American machinery owned and operated by Americans will grind inside of twelve months the greater part of the sugar cane raised in Cuba, Porto Rico and Mexico. It is estimated that Americans have over $15,000,000 invested in the industry. Before the Spanish-American War nearly all of the machinery on the sugar plantations in Cuba and Porto Rico was of French, English or German make. Practically all of the plantations were dismantled during the war. All of the destroyed machinery is being replaced from American shops.

The largest plantation in Cuba, and possibly in the world, is that of the Chappara Sugar Company in the eastern part of the island. The company has 66,000 acres of land. A thirty mile railroad has been constructed. The rails, cars and engines were bought in this country. This is the greatest sum that has ever been expended for sugar plantation equipment to be exported from this country.

The largest sugar plantation in Porto Rico, at Guanica, is now being equipped with American machinery. The plant will entail an expenditure of nearly $1,000,000. The mills will have a capacity for handling 1,600 tons of cane daily, and will annually produce about 16,000 tons of sugar. Contracts have been let for the construction of fiffeen miles of railroad, and cars and engines have been purchased. A 22,000-acre plantation near Tampico, Mexico, of which 12,000 acres are under cultivation, is being reëquipped with American machinery. In fact an army of Northern machines, which have wandered into the Southern by-ways, are grinding out sugar for the world.

AMERICAN MACHINERY IN EGYPT

THE frontiers are being reached. American bridges are in India, and on the banks of the Jordan an American has put in American

pumping machinery and an American bottling works and is shipping the water from that famous stream to all parts of the world.

Alexandria, Egypt, is the scene of the last notable achievement of American progress. What is considered the greatest work of its kind ever undertaken in Egypt is the successful installation of an American coal-hoisting machinery plant in Alexandria. It has just been completed. The huge mass of machinery that now towers above the surrounding shipping of the ancient city owes its origin to an American engineer, Mr. Alexander E. Brown. The great plant will completely revolutionize the present method of discharging coal from steamers, and will result in a valuable saving of time and money.

The coal that is discharged from the ships that bring their cargoes to the Alexandria docks is loaded into American pressed-steel cars, made in Pittsburg, and drawn by American (Baldwin) locomotives down to Khartoum, where American nails and American hardware are being used in reconstructing the city where "Chinese" Gordon died. All of the material is at hand for one of the industrial romances of the new century.

In the case of the coal-hoisting plant at Alexandria, it was not a matter of America winning

AN AMERICAN EXPORTING HOUSE IN SHANGHAI

in open competition against the world. The reason an American firm got the contract was simply that no other country in the world could furnish or manufacture the machinery desired. When the Egyptian Railway Administration decided to do away with the obsolete method of discharging colliers at Alexandria and to adopt modern methods, it took but a short time to

A CHINESE BANK

ICE CREAM FREEZERS FOR THE ORIENT
On a side street in Cincinnati

ascertain that the American market was the only place to come to. Promptly an order was given by the Egyptian Government to the Brown Hoisting Machine Company, of Cleveland, Ohio. Mr. Alexander E. Brown, of that firm, is the inventor of the machinery. It consists of a system of suspended bridge tramways whereby colliers can be unloaded automatically in about one-quarter of the usual time. The present plant at Alexandria is the first that has been installed in Egypt.

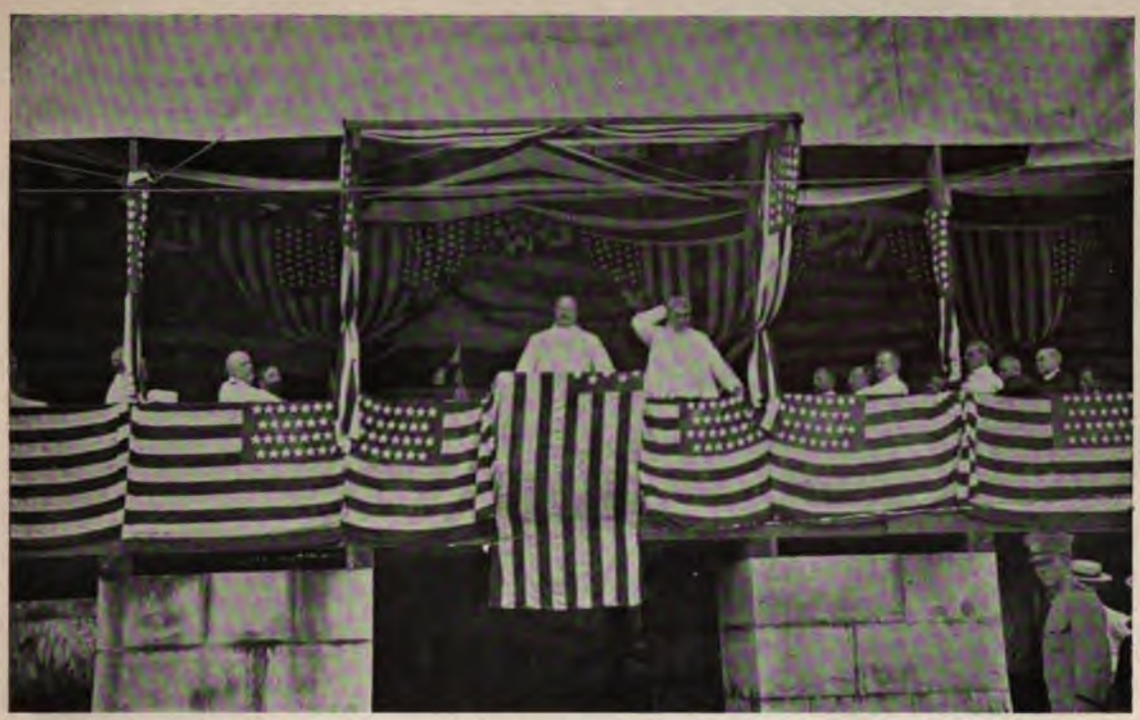
The hoisters at Alexandria have a capacity for unloading 4,200 tons of coal an hour. A boat that now takes a week to discharge will, by the use of this American machinery, be discharged in from thirty-six to forty-eight hours. These suspended bridge tramways or, as they are usually called, coal hoisters are six in number, and are each 353 feet 9½ inches in length. They are worked as follows: On a suspended track on the bridge, fourteen-gauge, runs a trolley carrying buckets, each having a capacity of one ton. On arriving over the hold of the ship the bucket is automatically lowered. These buckets can be unhooked so that three or four can be filled at the same time. When the bucket is filled it is raised again on the trolley, run back and discharged at any point on the quay or into railway trucks. A bucket can be raised from the hold of a collier, put on the trolley, carried to the farther end of the bridge, discharged and returned to the collier again in the space of one minute.

A TYPICAL CHINESE BROKER OR COMMISSION MERCHANT

WHOOPIN BUBBOO
A native employee of an American exporting house at their office in Calcutta

The machinery was shipped to Egypt in charge of six expert American machinists, who superintended its erection and who have remained in Alexandria, at the instance of the Egyptian Railway Administration, to operate the plant. The work of installation was completed in early September.

Thus, in a far away corner of the earth, renowned by its traditions rather than for its activities, complex machinery, typical new century product, made in America is working daily.



GOVERNOR TAFT DELIVERING HIS INAUGURAL ADDRESS, JULY 4, 1901
Secretary Ferguson at his left interpreting the speech into Spanish

A FEW AMERICAN PLANS ABROAD

A THOUSAND products are going to a thousand-and-one places daily from the shipping centres. Orders of steel freight cars have been shipped to Durban, South Africa, for the Zululand Railway until the road is almost entirely equipped with American cars.

The Auckland Electric Tramway Company (Ltd.), Auckland, New Zealand, is equipping its system throughout with American-made electric traction machinery, including motors, rails, wires, car trucks, etc. Equipping the road entails an initial expenditure not far short of $1,500,000. Both the Sydney and Auckland electric tramway systems, possibly the two largest in Australia, will be completely equipped with American products.

In connection with the supremacy in electrical matters of the United States, a singularly illuminative bit of testimony was unwillingly given a short time ago by the London County Council. This body advertised for an electrical engineer for one of its plants, but did not allow sufficient time to elapse between its notice and the closing date for applicants to permit of candidates from the United States seeking the post. This, it is believed, was done purposely. An Englishman was chosen. He proved incompetent to fill the position, though he possessed glowing recommendations. At last reports he was on his way to this country to study American methods of operating electrical plants.

Sir Charles Elliott, Special Commissioner of Cape Colony Railways, who was in this country a short time ago to place orders for 10,000 tons of rails for the South African British railroads into the Orange Free State and the Transvaal, for thirty or more locomotives and a quantity of

THE ADVENTURE OF SOME LOCOMOTIVE SUPPLIES
The supplies were being towed across Talienwan Bay. The tug pulled out one end of the boat and the supplies went to the bottom. Two of the crew were drowned

Photo by Gessford & Van Brunt

CHARLES R. FLINT

The president of a representative American exporting firm

narrow-gauge equipment, involving a total expenditure of $5,000,000, had this to say of American products:

"We have found by experience that we can buy better here than in Europe. Material is superior and better adapted to our country. The long war has practically ruined our railways, and the material for their renewal must be procured here."

Mexico is a natural field for American engineering and machinery. Only recently a striking concession was acquired by Americans for bringing a new water supply to the city of Mexico. American machinery will be installed by Americans. The total cost of the work will be about $6,000,000. The magnitude of the work can be seen from the following construction data: the work embraces the construction of a total of 36.6 miles of canals, 6.4 miles of steel pipe lines, the installation of pumping machinery, with 27,000-horse-power capacity, and an electrical power plant. The transmission lines will necessitate the purchase of some 1,400,000 pounds of copper.

Merida the capital of Yucatan, Mexico, is to be connected with its seaport, Progresso, by an electric traction road twenty-five miles in length. All of the equipment for the road will be purchased in the United States. Yucatan capital exclusively is behind the scheme. The Ferro Corril de Circunvalacion is the title of a new company recently organized in the City of Mexico for the purpose of constructing and operating an extensive American street railway system. The existing system is built almost entirely of American material, the rails, cars, and all the equipment in the generating station being purchased in the United States.

The Metropolitan District Electric Traction Company, Limited, the concern which was recently organized under the British limited liability acts, with a capital of £1,000,000, mainly with a view to undertaking the contract for the electrical conversion of the "inner circle," or Metropolitan District Railway, London, is composed of some thirty Americans and American concerns who control 46,750 out of the 50,000 shares. It was the organization of this company that started the cry in England against the so-called "American invasion." American methods of operation and American electrical machinery will be employed in whatever changes the new company makes.

It is a fact, not generally known, that a large proportion of American exports sell at a higher price than the same goods of English or Continental make. The American goods have won a place abroad on merit alone. The trade has grown despite many obstacles and not always because it has received intelligent attention or careful handling. American axes, cutlery and scissors have gained a reputation wherever they have been shipped in sufficient quantities, because of their marked superiority in quality and finish. It is a fact that knives and scissors made in this country are stamped "Sheffield" and sent to England to be sold and shipped abroad as of English make. It is in the little things that the American manufactures excel as well as in the great. Scissors handles had always been made perfectly round, and not to fit the thumb and fingers, until the American manufacturer came into the market and brought his Yankee ingenuity into play. This is only one example of a thousand that might be cited.

OBTAINING FOREIGN GOVERNMENT CONTRACTS

THERE probably is no more interesting feature of the broadening of America's commercial horizon than the bidding for foreign government supplies. There is a picturesqueness and a financial glitter about the awarding of large contracts which seem extremely attractive to our manufacturers. It is one thing to sell a dozen bales of cotton goods to a local importer in Tien Tsin, and quite another to supply under contract to the Chilian Government railway material valued at four million dollars, or five hundred thousand barrels of flour to feed the British forces in South Africa. Such contracts are by no means uncommon, in fact, hardly a week passes without seeing one or more important contracts awarded to United States manufacturers. The present year promises well in foreign government works or supplies. In railroad building is this especially true. Several months ago the Belgian Government approved estimates for the purchase of various rolling stock for the State railroads. The statement was sent out from the office of the Minister of Railroads, Post and Telegraph, No. 11 rue Louvain, Brussels, that about 15,000,000 francs ($2,895,000) had been appropriated for the acquisition of 155 heavy locomotives, of various types, 180 tenders, and a quantity of other railway material. Within the past six months Nicaragua has placed an order with its agent in New York for 2,400 tons of steel rails for the new central branch of the National Railroad, which is being constructed by a German engineer. This contract is significant, because of the fact that heretofore Nicaragua has always purchased rails in Germany and England, and doubly so because the contractor is a German. In this case, as in the majority, it was the all-important question of time. From no other country could the rails have been obtained in the time required.

A survey of the field proves beyond peradventure that the present year will witness a decided increase in the number of important contracts to be awarded by foreign governments and

individual corporations. The cessation of hostilities in South Africa is bound to result not only in renewed commercial activity but also in the inauguration or completion of public works. It will be necessary to repair the ravages of war, and to restore the transportation lines to their former degree of efficiency. A new railway is to be built in Korea, and the bids for equipment are certain to be given to American contractors. Reports from China indicate that the modern electric tram soon will roll through the narrow winding streets of more than one Mongolian city. Other countries are contemplating extensive improvements in many fields.

A visit recently made to a number of the foreign legations in Washington determined the fact that American exporters will be enabled to bid on many valuable contracts during 1902. It is the rule of a number of countries to advertise impending public works through their legations abroad, but it is only during the past two years that the United States has been considered a factor in this important distribution of commercial chances. The sudden and spectacular entrance of this country into the arena of foreign trade has altered previous conditions so radically that the majority of the legations in Washington now receive and exhibit all the official specifications issued by their respective countries. The Secretary to the Japanese Legation in Washington stated to the writer that the only fault to be found with the American exporter is that he seems too busy with the domestic branch of his business to keep himself informed of foreign market conditions, also that there is a paucity of mediums in this country by which such important intelligence as pending foreign contracts can be published. "In Japan," he added, "we have our gazettes and also quarterly publications devoted to that purpose. I understand, too, that both France and Germany have periodicals whose sole duty is to see that their manufacturing and contracting interests are kept in touch with commercial opportunities in every part of the world."

CONCRETE EXAMPLES OF A WORLD-WIDE TRADE

IN every civilized land and in most savage countries the traveler sees the evidence of American skill and ingenuity. Punta Arenas in Tierra del Fuego is the southernmost continental spot on the globe, but the modern lighthouse on that lonely coast is equipped with electrical machinery made in Schenectady, N. Y. The firm that manufactured it has also pushed electricity farthest north by installing dynamos at Hammerfest, in Norway, and, though it is a far cry from the deepest drifts of the Calumet and Hecla mine to Yanteles, in the Andes, 14,000 feet above the sea, two consignments recently left Schenectady, one for the deep mine, the other for the mountain.

By the very bedside of the Pope is placed every night an American flashlight apparatus in the form of a cylinder with an incandescent bulb in one end—in effect an electric candle. At Bagdad, Aladdin has been replaced by a New York concern. Lamps of fanciful patterns are sent from New York to a point on the Persian Gulf, and thence conveyed over some 300 miles of desert on camel back. They are then placed on rafts and towed 100 miles up the Euphrates and again loaded on camels and carried to their destination 200 miles from the river. These lamps decorate the palaces of the Sultan of Morocco, the Prince of Siam and several rajahs in British India; and they are also popular in Jerusalem.

From the Falls of the Couvery, one of the sacred rivers of India, to Kolar in Mysore American electrical engineers have recently set up an American transmission plant under somewhat remarkable circumstances. There are still wild elephants in Mysore and there will always be white ants. But as a white ant will venture not more than five or six feet up a pole in search of edible wood, the steamer from New York carried out to India iron post-sockets seven feet high in which to set the poles—to the discomfiture of the ants. To disconcert the elephants and prevent grounding of the current through any behemoth that might venture to test the wires with his trunk, the engineers after careful measurements strung the wires just beyond reach of the biggest possible elephant standing on hind legs and groping. There is another American electrical transmission plant at Coolgarie, on the west coast of Australia, and electric street railways with equipment from the United States in Cape Town, Port Elizabeth and Durban in South Africa, Buenos Ayres, Sydney in Australia, where $3,500,000 is to be expended and where the entire equipment and all the material, according to the Chief Railway Commissioner of New South Wales, will be American—in Chemulpo, Korea, in Japan and in a dozen other places. Equipment amounting to $1,000,000 is to be ordered here for Port au Spain in Trinidad, and Yorkshire, Lancashire and Nottinghamshire are to have American electric tramways; the project will call for the expenditure of over $15,000,000. An ice-breaking boat, the *Kermak*, plies up and down the Neva at St. Petersburg—the largest in the world. Its novel electrical ice-breaker is American. Electric locomotives have been made in Schenectady for the "Tuppenny Tube" in London. An electric railway runs from Cairo to the Pyramids; the generators and motors used in building the line were shipped

from New York. One little native sultan in Borneo has displaced his punkahs and punkah wallahs in favor of American electric fans, and the progressive native princes are following his example.

Soda fountains have been shipped to Calcutta and other Oriental cities and ice machines to India and Japan, while the typical American luxury of coolness is being introduced into France and England through the medium of ice chests—uncommon articles there. The Syrians are finding American mosquito curtains cheaper than malaria; the Persians have reached the stage of civilization that calls for photograph albums; and the Chinese, some of them, not only amuse themselves with vitascopes, but even correspond by phonograph, sending cylinders instead of letters. American typewriters—that essentially domestic product—are clicking now a dozen languages, in a dozen kinds of characters, in the Government departments of every nation in the world; the treaty of Paris was written with one; Lord Roberts carried them through his campaign; they have been on North Pole explorations and South Pole explorations; they are ubiquitous. And any one who has seen the myriad characters of the Japanese language will be amazed to learn that an American machine that will write Japanese is an accomplished fact, soon to be on the market.

A grave-faced Arab, his eyes sparkling, a sedate and turbaned Mohammedan, a typical Cairo donkey-boy, and a native Egyptian whirling about on an American merry-go-round to the tune of two-year-old rag-time ditties was one of the things to be seen in Cairo a short time ago. Another has been recently shipped to Spain.

Numbers of flour milling plants of American manufacture have been established lately in the fertile wheat-growing regions of interior Manchuria. Because of the lack of adequate transportation facilities, this was accomplished only after infinite labor and difficulty. The machinery is shipped from New York to Vladivostok, Tien Tsin or Port Arthur, whence it is conveyed by primitive methods inland to distances averaging from 1,500 to 2,000 miles. It is an odd fact that, at present, Russian soldiers quartered in that part of the world are fed on bread made largely from American wheat. The American machinery now being introduced will, in time, enable the Russian Government to use the Manchurian wheat.

To carry laundry machinery to Shanghai will strike the average American as carrying war into the enemy's country. A successful steam laundry is now in operation in that Chinese city, with a capacity of 5,000 pieces a day. There is another at Vladivostok. The water-works plant in the native quarter of Shanghai is of American machinery throughout, including pumps, engines, boilers, piping and tubing.

Similarly significant is the fact that a majority of the breweries recently built in Germany have had American brewing apparatus installed in them, especially the new breweries in the South of Germany. Perhaps no other single article of export illustrates so vividly the practical results of the American passion for improvement. Another story that will illustrate this tendency came to light recently. A famous English firm sold the American rights of a patent to one of the biggest corporations in this country. Within the past two months a contract for over $100,000 was given out in South Africa for the supplying of machinery manufactured under this particular patent. The English and American concerns were rival bidders. The American was the successful bidder and got the contract, not because his price was lower but because American engineers had made improvements that enabled the machine to do more and better work in a given time than the original English machine could do.

Barber shop equipment for Russia, boot polish and dress shields for France, and clay pigeons for England, are some of the other exports that may be classed among oddities. A firm in Cleveland, O., recently received from an English house an order for 2,000,000 clay pigeons. In a recent exposition in Copenhagen wholly devoted to rat-traps the three exhibiting American firms—one a coöperative community—received awards for inventions.

They prefer American bath-tubs in Australia to the immemorial British kind, and in South Africa, where the British army has been more largely supplied from America than anyone has supposed, the American wagons, drawn by American mules, were so far superior to others that Lord Roberts himself declared that English and colonial wagons could not compare with them. General Baden-Powell found the Canadian Mounted Police contingent among his forces wearing excellent hats secured from a firm in Philadelphia, and when he could not duplicate them in England he ordered ten thousand, though they retail at seven dollars apiece. He says they are good hats: he wears one himself. In South Africa, too, the discarded cans of American meat and fruit mark the road from Cape Town to Pretoria as clearly as whitened bones once marked the Pike's Peak trail.

The success of American locomotives and cars in every country in the world is too well known to require recapitulation, but two recent triumphs deserve notice. One of the fastest and best known trains in Europe is the "Rapide" between Paris and Monte Carlo: it is drawn by an Ameri-

can locomotive. The fastest long-distance train in Europe is the Oriental Express from Paris to Constantinople: that too speeds along behind one of our engines, a machine so powerful that an engineer said of the equipment: "The question is not whether the engine is good enough for the train; it is whether the train is good enough for the engine." Other American locomotives were recently sent up the Nile in dahabiyehs to Khartoum, where within gunshot of the spot where Gordon was massacred what is called the Yankee Express is now making daily stops.

Some of the minor exports also have a picturesque value. If "Kim" and his lama had come up through Central Asia this year or last, they would have found in many Indian villages machinery housed near the cotton fields. The native engineers would have proudly shown them a shining brass plate, affixed to the whirring machine, bearing the name of a well-known manufacturer of cotton gins in East Bridgewater, Mass., U. S. A. Virtually all of the 300 cotton gins operated in Khiva, Bokhara, Samarcand and other industrial centres in that region are of American manufacture, and orders are on the way for at least 100 more.

American pressed glass is an export on which there is practically no European competition. There is a rapidly growing demand in Europe where it fetches a considerably higher price than the products of the glass manufacturers on the other side. Australian firms recently placed orders here for $150,000 worth of glassware. American table glass is now almost exclusively used in Australia, the German and English makers having practically been driven out of the field.

Probably no country of Europe favors American products less than Austria. Yet within the past three months Carl Redlich, constructing and supervising engineer of the Austrian Government, came to this country to place contracts for machinery, to be utilized in various public improvements and to cost about $100,000,000.

Conservative men in the trade assert that at least seventy-five per cent. of the mines in South Africa are equipped with American machinery, including the famous De Beers mines at Kimberley. The management there is now considering the expenditure of about $1,000,000 on extensive alterations and improvements. It is stated that the order will come to the United States. A recent estimate placed the value of American exports now lying along the docks at South African ports at $3,000,000, the war having prevented the goods being sent inland to their various destinations.

Orders are now being placed in this country for substantial lots of pumping equipment, machine tools, etc., for improvements on the Suez Canal. The channel is to be deepened, and it is proposed that the entire length of the canal be lighted by electricity. If so American electric-lighting plants will be installed.

Most of the electrical equipment to be used in the Mersey tunnel, which runs under the river, connecting Liverpool with Birkenhead, will be made in the United States. The contract will be worth about $1,750,000.

The machine shops of the Government railways in India have recently put in American machine tools, as in Spain and other countries. Even Vickers & Maxim, the British makers of ordnance, shift their material with an electrical crane from the United States. Horse-shoes for the British army, elevators for South America, printing presses for England, shoe pegs for Germany, bicycles for China, scroll saws for Wadi Halfa, far up the Nile, coal for Belgium, granite for England in successful competition with the far-famed red Scotch granite, canned meats for West Africa, typewriters for Siberia, shoes for South Africa, preferred to English shoes because of their shape, earthquake-proof frame houses shipped in parts to Caracas, every imaginable American product goes to every imaginable corner of a hungry world.

THE CENTRE OF A WORLD-WIDE CIRCLE OF TRADE

THE elevator shoots one to an upper story of a New York sky-scraper. Back and forth through the corridor hurry noiseless messengers. A sign says: "This is part of our office. No whistling or loud talking." On each side of a transverse corridor hangs a row of signs that read like the title page of a school geography; and to left and right along this quiet hall are doors that lead to the offices and counting rooms of one of the largest export houses in the world. One door is inscribed "China and Japan," another "Uruguay," another "West Australia," and so on round the globe; the geographical title page is repeated piecemeal. Here diverge the ramifications of American trade: from each of these bustling clicking offices one web of communications stretches inland to every producing industry in the country from the billion dollar steel corporation to the humblest maker of shoe-pegs, and another reaches through steamship lines, railroads, junks, scows, canal boats, llamas, camels, cables, telegraph lines and mails to every hidden corner of the world where white men have penetrated. Here we see at work the machinery of the export business.

In multiplicity of detail the business is as complicated as the handling of an army. Naturally it requires army organization. Under the president

is a board of directors. Responsible to the board of directors is a manager for each geographical department. The manager of the China and Japan department is held accountable, for example, for every transaction in his office and in his allotted portion of the world. Accountable to him are the subordinates next in rank, both in New York and in the agencies in Chinese and Japanese centres. A business mistake in domestic trade is serious enough, but multiplied by three thousand miles it becomes so vital, that this placing of responsibility descends step by step to the newest office boy. With the accuracy of clockwork each member of the organization does his allotted work. The West Australian manager has no idea whatever of the trade with the Argentine, but he knows all about the West Australian market. His agents abroad study the needs of merchants, the best kinds of packing, transportation facilities, money rates, local customs, every business detail, and the mails are kept busy and the cables hot speeding the information that drifts home months too late in consular reports.

A storekeeper in Brazil runs out of his stock of cotton goods. The agent for the New York house drops in on him as if fortuitously. He comes at the right hour, between 9:30 and 11:30. He wears a frock coat. That is necessary in Brazil. He does not slap the merchant on the back and invite him to drink. He is suavely polite. He discusses the weather. He begs for a business appointment. He secures one—for three days later, concealing his horror at the unbusinesslike delay with smiling courtesy and irreproachable Portuguese. And when the appointed hour arrives he gently leads up to business, displays Portuguese catalogues, quotes prices, including freight, agrees on conditions, and secures an order after a week, perhaps, of slow discussion. Turning the order in at the agency he represents, he begins the process over again with another leisurely buyer.

A single code word is flashed by cable from Rio to New York. The messenger boy pushes it through the window of the counting-room in the New York skyscraper, where it is opened and sent to the Brazilian department. There the code word is sought out in a ponderous volume as large as a half-dozen dictionaries, and then typewritten on a sheet of pink paper together with a translation, which sometimes covers half the page—an eight-sentence message in an eight-letter word. At once letters are dispatched to dealers in cotton goods requesting bids on a consignment for Brazil, the price to be "c. i. f.," "covering cost, insurance and freight," or, as more frequently happens, a request for a price quotation is sent to some single firm that the Brazilian buyer has mentioned. When bids have been received from the manufacturers the lowest in which the terms have been acceded to is accepted, and another single-word cable is dispatched to Rio Janeiro—first typewritten, together with a translation, on a white sheet to be filed with the pink order for reference. Later, when the cables have been verified by letter, all the documents of the transaction are docketed together.

A week after the acceptance of the bid a letter comes from the manufacturer stating that the ordered goods are sent, according to quotation, "f. o. b. New York"—free on board steamer in New York harbor. A bill of lading accompanies the letter. A check in payment is sent at once. An export house is not merely an agent but a business firm; it buys directly from the manufacturer, paying upon delivery in New York; thenceforward the goods belong to the export house until delivered to the merchant in Brazil. Upon the arrival of the goods at the merchant's city he pays upon whatever terms he has arranged for to the agency through which he deals, and the agency remits to New York. There are a dozen variations of this form of doing business.

It is necessary to know, however, a thousand facts that do not enter domestic trade. Clerks must have at their finger tips such information as currency values, rates of exchange, hours for closing mails, the time that mails and cables take in transmission, the methods foreigners have of doing business. Such elements enter mail and cable times as this: that if a cable message is sent to Shanghai at the hour of closing business in New York on Monday, it will arrive in Shanghai and give the agent there a day to act on it and reply; and the answer will be back in New York at the hour for beginning business Tuesday morning. Such curious business customs must be attended to as this of the Chinese: that they are superstitiously attentive to the "chop" or trade-mark on the product sent them. A large consignment of cotton goods, for example, was sent to China. The trade-mark had been half obliterated, though the goods were in every respect up to the standard. The Chinese merchant would not take the consignment. Every fact of this sort becomes part of the stock-in-trade of the export house, and if the whole vast world-wide business moves with well-oiled smoothness it is only because of eternal vigilance in minute details.

WORD FROM THE OUTPOSTS

FOR all that the invasion of foreign lands by American goods is only just beginning there have been for years outposts at every limit of civilization where the stars and stripes wave from

year's end to year's end. And behind the flag there, as here, there is hard, conscientious work. The consuls are the scouts of trade and the news they furnish is word from the front in the new struggle of which the work done to date consists m rely of careful preparation and a few successful skirmishes. These men see the many obstacles which the American manufacturer must overcome in their particular districts far more clearly than he does, or even than does his friend, the exporter. The crying needs at present, according to many of them who have written their opinion for this magazine, are those of more direct representation abroad; of an increase in direct shipping, cutting off the profits of many middlemen; of more commercial travelers sent to the ends of the earth by manufacturers and exporters; of catalogues printed in the native languages and well circulated; and of a realization that a foreign trade can be gained only by as thorough a knowledge of the ground that must be covered there as of the necessities of domestic trade. Capital and much hard work are as essential in the development of the smaller phases of exports as in such spectacular incidents as the big viaduct built in Burmah or the almost daily happenings in locomotive building. Nearly every letter we have received from the consuls has been full of striking information and interest. Extracts from a few of them will give an idea of the world-wide sweep of trade which has been set in motion.

"The merchants and manufacturers of the United States, with a few conspicuous exceptions, are doing but little in the Kingdom of Wurtemberg to secure an opening for their goods. It is not because there is no opportunity for the sale of such wares, nor is it because the fact that such an opportunity exists is unknown to our merchants and tradesmen. Merchants and manufacturers still send their literature in the English language, with prices in United States currency and expect to sell their goods by circulars and demand the payment therefor before the goods leave the warehouse in America. The boot and shoe manufacturers in the United States know that under proper management there is an immense trade awaiting that firm who will run a little risk, spend a little money and go to a little trouble in working up a trade abroad. The manufacturers of furniture know it, the bicycle men know it, the canners of vegetables know it, and so do many manufacturers in other lines. The reason is that they are not the born 'traders' that the Germans and English are. They are unwilling to run the risk of a new trading venture. They prefer to struggle with the difficulties which are near at hand and with which they are more familiar."

Stuttgart, Germany.

"Nearly every day's mail brings letters of inquiry from nearly every branch of business and from all sections of the United States in reference to the condition of the iron or hardware, machinery, clock, coal, wood, hat, confectionery, fruit, cereal, etc., markets, prices, etc., asking for the addresses of merchants in their respective lines of business and to be put into communication with such. It would seem to me that a good Yankee drummer or agent traveling through foreign countries with a trunk well filled with samples could reap a greater harvest of orders and success than what can be obtained by simple correspondence, which naturally causes delay, and such delay consequently may prevent the introduction of American wares."

Freiburg, Baden, Germany.

"I am afraid I must tell you that Americans are doing very little in this district. Jerez is *not* a seaport town. There is, however, a great import from New Orleans and other ports of oak staves for casks. You will also find that every shoemaker has got American boot varnish and one or two gentlemen have got American buggies and are very pleased with them. Also, everybody seems to be buying a small Kodak camera. Americans have been here to secure a trade in agricultural machinery, but unfortunately they have not succeeded as our farm laborers are against all kinds of machinery that tends to save labor."

Jerez de la Frontera, Spain.

"Americans are doing nothing practical to secure trade here. Sending catalogues etc., mostly in English, amounts to nothing. Existing conditions are against business. There is no *direct* steam communication between the United States and the majority of Spanish ports. This means two freight rates, two insurances, transshipment charges, delay, and increased chances of damage or breakage. In the absence of any treaty of commerce, United States merchandise pays discriminating duties. American commercial travelers are unknown here. American export houses quote f. o. b. in a United States port in United States gold and on a basis of American weights and measures, which the people here don't understand. Then they usually ask for a banker's confirmed credit against shipping papers. European travelers (especially Germans and Belgians) overrun Spain; they carry catalogues in Spanish, and (speaking Spanish) they explain their wares, when they can't exhibit samples. They quote delivered c. i. f. in Spanish ports, in English or French currency, and on metric weights: they accept the smallest orders, give prompt shipment, and accord three or four months' credit to respectable buyers. Under

equal conditions, Americans should sell food stuffs and hardware here on a considerable scale."

Carthagena, Spain.

"English and Germans lead in the Spanish markets. This sounds very peculiar when one considers that Americans can hold their own in England and Germany, but it is the natural consequence of mistaken policy. And the mistake the American manufacturer makes is in naming the 'European General Agent.' The 'European General Agent' generally settles down in London, Paris, Berlin or Hamburg and from there is expected to control the trade all over Europe. If one considers that there are in Europe a dozen important countries, a dozen different national characters and, worst of all, a dozen different languages, it will be easily understood that a 'European General Agent' in most cases, if not always, is an absurdity. Spain is one of the most neglected countries by Americans although I feel confident that it will prove one of the best European markets for American goods, if certain points are taken into consideration."

Bilbao, Spain.

"Americans have been identified with Siberian interests for forty years—Collins with his idea of the trans-Siberian railroad, Kiernan and the telegraph projects, others as sealers, whalers and adventurers. Many made money and left the country as too primitive for comfortable and civilized residence. A few remained and grew rich in merchandizing and fishing and fur dealing. Some of their descendants are here today. Enoch Emery, a Cape Cod boy, came out at fifteen years of age and is now, at fifty, the best-known and wealthiest American in Siberia. He has stores at Vladivostok, Nikolaiefsk, Habarofsk, Blagoveschensk and Moscow. His chief manager at Habarofsk, Mr. E. C. Huff, is also a New Englander from Maine, but residing when at home in San Francisco. Mr. Emery is the man who is said to have added 20,000 effective men to the population of Siberia by the introduction of American agriculturāl machinery. Mr. Smith, long known at Vladivostok, was also for thirty years or more a prominent merchant here, selling ammunition, gunpowder, etc., and the establishment is still run by his widow. For the present American trade is at a standstill. To complete the disadvantages, the administration of the tariff, on account of inadequate force and the vast amount of knowledge required, is very bad, causing much delay and confusion."

Vladivostok, Siberia.

"American push and enterprise is being felt all along the line in this part of Belgium. Improved machinery is doing wonders. The manufacture of firearms, which is the leading industry here, is being revolutionized by the means of labor-saving automatic machinery, where the gun parts are made by machinery and are interchangeable and much better than the hand made and for much less. What is true of firearms is true of other industries. Large quantities of machinery, zinc ore, corn, canned goods, boots and shoes, office furniture, farm machinery, etc., are finding a ready market here. There is still a market for more if the field was thoroughly worked. American goods are in good demand, but our manufacturers must be in a position to give longer credits."

Liege, Belgium.

"We are making steady advances, although the import is still chiefly confined to cotton cloth, kerosene, flour, wire nails, canned goods, and supplies for our foreign community. The difficulties in the way of introducing foreign machinery, implements, clothing, etc., cannot be appreciated by the people of the homeland, who think that a new market open to four hundred million of people ought to make great demands for all kinds of goods in the manufacture of which Americans excel, but the mass of the people are poor and the cost of such goods, tools etc., as they use, is very low as compared with the better foreign made articles. Plows cost from one to two dollars United States currency. Harrows, fifty cents to one dollar. Hoes five to fifteen cents. Rakes five to ten cents and other tools in proportion. No wagons or vehicles of any kind on wheels are in use in Southern China, which eliminates at once all articles used in connection with wagons, carts, carriages, etc. As I have previously stated, by persistent effort in the larger cities and by placing goods on the market at cheaper rates than the home made articles, a trade is gradually being built up in flour, kerosene oil, cotton cloth and a few other articles of consumption. Nearly everything foreign that is introduced rides roughly over long-standing prejudices and superstitions, and the process of overcoming these must be slow, but patient, persevering pressure is slowly winning a place for many useful articles, and as the people learn to re-adjust themselves to the changes their introduction will be more general."

Fuchau, China.

"Until we have a direct line of ships from New York to the Syrian coast we cannot hope to compete with other countries; the freight brings goods too high to suit the people here whose first inquiry of goods, 'Are they cheap?' is the chief item in importance. The articles may be almost worthless but if cheap all right. Another feature that hinders United States trade is the subject of credit. Here they say, 'When you like,' and

'yarina' (tomorrow) is the day to do business, which is not the American idea."

Alexandretta, Syria.

"American manufactured goods are not yet known in this country, where they would surely be much appreciated. The only way to make them known would be to establish a sort of permanent exhibition of American goods. If only some twenty firms would join in this scope and decide to spend about $100 a year each, I am quite sure that with $2,000 a year a very attractive and useful exhibition can be established here to the great advantage and extension of American trade."

Alexandria, Egypt.

"Curaçao is only a spot on the globe—possibly the size of a pinhead on a globe two feet in diameter. Since the inauguration of the American Red "D" line of steamers the proportion of American goods imported has gradually increased, till it now exceeds one-half. The breadstuffs, the boots and shoes, the machinery and the coal are now exclusively American. But if we are to sell goods to South America we must send our best men to find out the exact tastes of South Americans and make goods to suit them—cheap and at reasonable credits."

Curaçao, W. I.

"The Greek people have learned that a great many of the products of our mills and workshops are far superior to those manufactured in other countries; and being ardent admirers of America and Americans, there is a growing demand among them for American products. They want our tools, machinery (especially agricultural), watches, jewelry, thread, cotton, woolen and rubber goods, sewing machines, typewriters, bicycles, carriages, and many other articles too numerous to mention. We need a direct line or lines of steamers connecting the two countries. Quick transportation and reasonable freight rates would soon fill the markets of Greece with American products."

Athens, Greece.

"American enterprise has made itself felt in a marked way at Harput, in Eastern Turkey, the traditional site of the garden of Eden, between the head-waters of the Euphrates and the Tigris. Within the few months which have elapsed since the opening of this consulate direct trade relations with America have been inaugurated. A general agency for the sale of American wares and the representation of American manufacturers at this point has been organized. A commercial exhibit has been opened at the consulate. The consul's bicycle, the first to fly over the valley of the Euphrates, has excited such interest and such a demand that a special agency for American wheels has been formed. The authorities of the province are deeply interested in the introduction of American agricultural implements. One consignment has already been received and another is on its way. These machines are destined to revolutionize the agriculture of the region and enormously increase its productive capacity. A model farm near Harput will offer a standing object lesson of the advantages of the new machines. The American sewing machine within a few months has gained a permanent foothold, displacing completely all European competition. There is a demand for our windmills, our milling machinery, tools, iron-working machinery, shoes and for most classes of articles where cost of transportation is low compared with the price. The item of freight from the nearest seaport on the Black Sea exceeds the cost of ocean transportation from New York, and is the chief handicap on the commerce of the region."

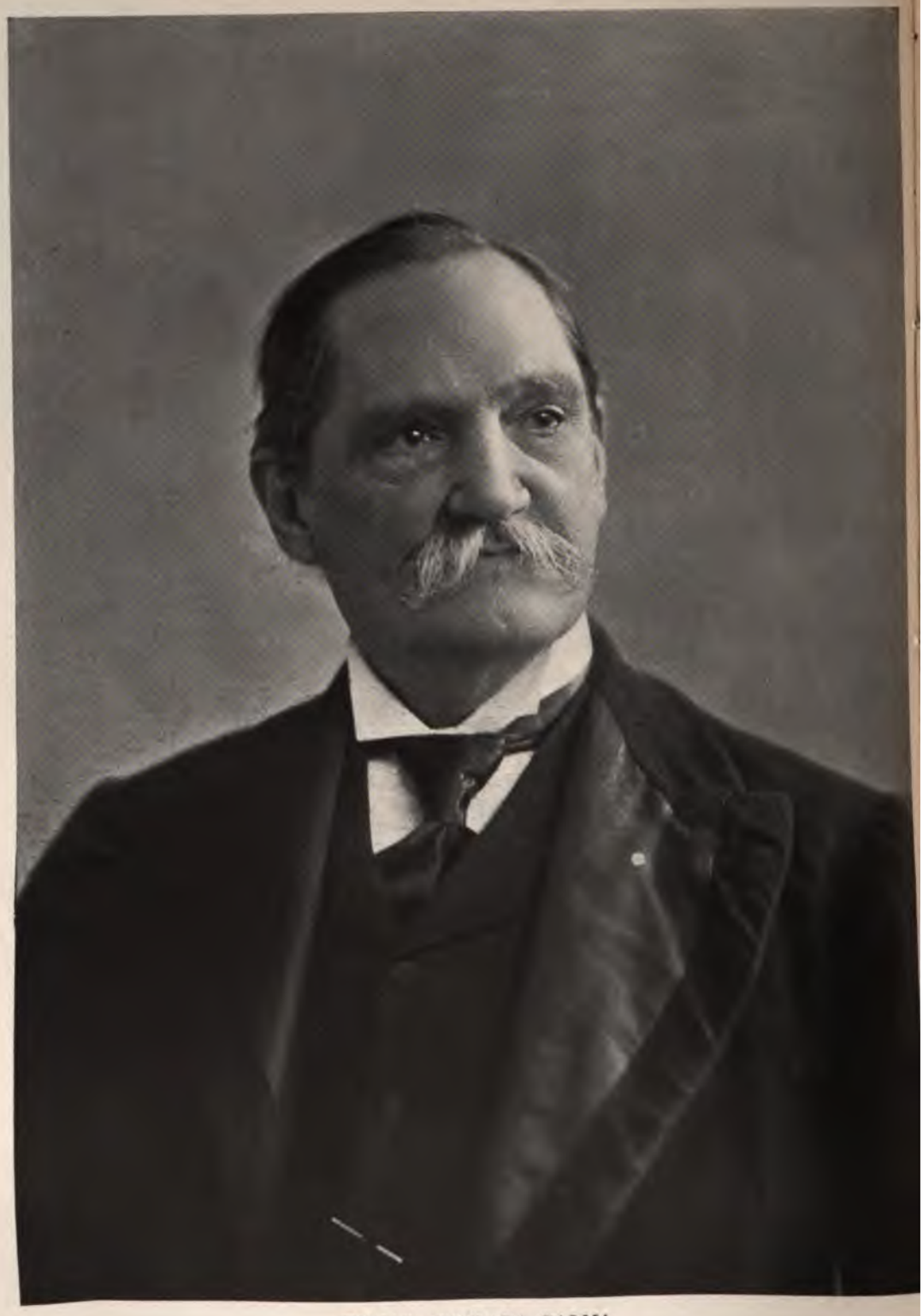
Harput, Eastern Turkey.

THE MANUFACTURERS' ASSOCIATION

THE Manufacturers' Association is just what its name implies; it is an organization of manufacturers banded together to help in every way possible our industries. It takes care that before any national legislation affecting trade or manufacturing is passed, its views are conveyed to the members of Congress; and it watches all such legislation with a vigilant eye.

It is furthermore a foreign clearing house for trade information. It will find out for its members anything regarding the manifold intricacies of trade, either by making inquiries through its established agencies abroad, or by reference to the thousands of sources of information on file at its offices; it will send to any spot advertisements of its members. It publishes a paper devoted to export trade, and a series of pamphlets treating vital commercial subjects as they become important; and for distribution abroad it sends out each year—not at random, but to reputable foreign merchants—a trade index in three languages, showing to these merchants what American manufacturers belonging to the Association can supply him with goods, whether he desires to purchase needles or anchors, tooth-brushes or locomotives.

In New York the Association supports an "International Shipping Bureau" where shipments of goods are attended to from the factory to the port and from the port to the foreign merchant. The Association is one of the forces which are trying to smooth the path of world-commerce so that even the few geographical traditions that still exist will soon have no more meaning than an American state-line.



TOMAS ESTRADA PALMA

President of the Cuban Republic

THE WORLD'S WORK

FEBRUARY, 1902

VOLUME III NUMBER 4

The March of Events

EAGER expectation—this is the mood of scientific investigators, especially in biology and physics and even in astronomy; and the public also is expectant. At no time since the rise of modern science has hope of revolutionary discoveries been keener. Careful scientific training forbids generalizations until experiment has reached demonstration. But the discovery of the nature of nerve-action, made by Dr. Albert F. Matthews of the University of Chicago, has been pronounced by his associate, Dr. Jacques Loeb—both men of the highest scientific standing—as warranting "the most nearly fundamental physiological generalization of the last fifty years." The general purport of it is that the particles of the nerves which are "colloidal," that is are formed of a kind of fluid, have positive electrical charges, and that the action of the nerves is a form of electrical energy. Muscle also is "colloidal," and a motor-impulse sets a negative current in motion, and contraction or coagulation follows. The theory explains the action of intoxicants and of anæsthetics. They make the nerve matter more stable and thus hinder or forbid the transmission of motor-currents to the muscles. It explains also the exact way in which snake-poison acts on the system and why alcohol is an antidote. The whole matter is too technical and too complicated for the layman to follow the processes of the experiments; but the great fact that stands out is the apparent demonstration of the exact electrical nature of nerve-action; and this is a generalization that may give the cue to still more important discoveries.

It is true that these experiments have apparently brought us no nearer directly to the secret of what life is; but they greatly quicken the hope of the physiological chemists and of workers in every department of biology. Dr. Loeb, continuing his experiments to determine the nature of death, has postponed it in sea-urchins' eggs in such a way as to lead him to regard it not as a cessation of activity, but as a "morphological process." To speculate on the nature of life and of death—this is what men have done to the confusion of thought since the dawn of intelligence. But to entertain the hope that science may solve the riddle—whether it be at the hands of the astronomer or of the biologist or of the physicist—this is the temptation and the privilege of men who have the good fortune now to be passing through the world. And perhaps no human labor ever brought greater exaltation or gave a keener expectancy than the masterful workers in these positive

sciences feel. They are the modern seekers of the Holy Grail.

THE QUEST OF THE MODERN HOLY GRAIL

AND original research receives an incalculable stimulus from every such discovery as this by Dr. Matthews—perhaps that is its greatest direct value. And we have fallen on fortunate times in that men of great wealth are making more research in America possible. The recent benefaction of Mr. Rockefeller in organizing an institution in New York for original research in the medical sciences is now followed by the unprecedented gift by Mr. Carnegie of ten millions of dollars for the establishment of the Carnegie Institution at Washington. The plans of the founder and of his advisers have not, when this is written, been made public in detail; but the preliminary explanation is that it is to be an institution to promote original research in "science, literature and art." This is a comprehensive programme, and its comprehensiveness suggests that original research has done little to promote literature or art, much as it has done for the better understanding of them. But in science —original research *is* science—the conquest of knowledge is promoted so surely in no other way. There is no other form of investment which surplus wealth can take that has a chance of so large a return to humanity, for the return may be simply incalculable; and in no other direction does the imagination so easily run riot and such a vista open.

The institution is not to be in any sense a duplication of any university. It will not be a university at all, in fact, in the usual meaning of the word. Nor will it be a Government institution. Its aim will be to promote original research, not for the instruction of students nor as a mere method of training men for special pursuits, but as a direct means of discovery. It will supplement the work done by all our other educational and scientific institutions and do work, it might almost be said, of a new kind. It will at least systematically and directly promote investigation such as has hitherto been done, so far as it has been done, in scattered ways and with insufficient help and insufficient coöperation. The cue to its character is given by Dr. Daniel C. Gilman who will be at its head. He has stood distinctly for work in original research.

The right direction of such an undertaking is very different from the direction of any institution that we have, and more difficult. But Mr. Carnegie has chosen a board of trustees that represents a wide experience and a mature knowledge both of educational problems and of the whole machinery of knowledge. The gradual unfolding of the plans of the new institution and the working of them out will be a matter of profound interest in every part of the world. For our own country it ought to become, and doubtless it will become, a new and strong stimulus to scholarship and to high intellectual endeavor.

The difficulty with investigators in the United States hitherto has been that most of them have been hindered from giving their best work to research because they have at the same time been obliged to teach; and most of them have had to teach immature youth. The combination of the American college, which is primarily a school for youth and ought so to be, with post-graduate departments has in most cases kept teachers from becoming real investigators, but it has not kept them from trying to be. In many a school the result has been hurtful both to teaching and to investigation. Such institutions as we shall soon owe to Mr. Carnegie and to Mr. Rockefeller will go far toward making a necessary divorce of teaching from original investigation.

Mr. Carnegie has now, by the way, outdone by far every previous private benefactor by his gifts to various educational plans and institutions. He gave away during the last calendar year more than forty millions of dollars. At this rate of release the owner of the princeliest fortune in the world may achieve his ambition to die poor—in wealth, but rich in his service to mankind.

REVOLUTIONARY APPLICATIONS OF SCIENCE

THE same eager expectation that fills the world with reference to the possible discoveries of pure science is felt also with reference to the practical application of scientific knowledge. Just when Dr. Loeb and Dr. Matthews were making an explanation of their work, Mr. Marconi was proving the possibility of wireless telegraphic communication across the Atlantic. The full value of this demonstration cannot of course yet be accurately foretold; but it is a reasonable ex-

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SENATOR MARCUS A. HANNA

Chairman of the Industrial Department of the National Civic Association

pectation that it may in time wholly change our present system of telegraphy. It is probable that we have yet used electrical communication only in the crudest and most costly ways. Mr. Iles's interesting article in this magazine is enough to prod the slowest imagination. The purely practical achievement of wireless communication that is as impressive as any was, perhaps, the frequent interchange of messages a few weeks ago between two ocean steamships one thousand miles at sea. The ships were at no time within sight of each other, but many messages were sent and received at a distance of more than one hundred miles. Persons on one ship sent messages to friends on the other and received responses.

Another practical revolution in the domain of physics is hoped for from the work of Dr. William W. Jacques, of Boston, who is engaged on the task of reducing to commercial use his method of transferring power from coal directly into electricity without the intervention of steam. This would so multiply the available power of coal and reduce the cost of running machinery as to effect an economic revolution; and it would save for an almost incalculable period the fuel supply of the world.

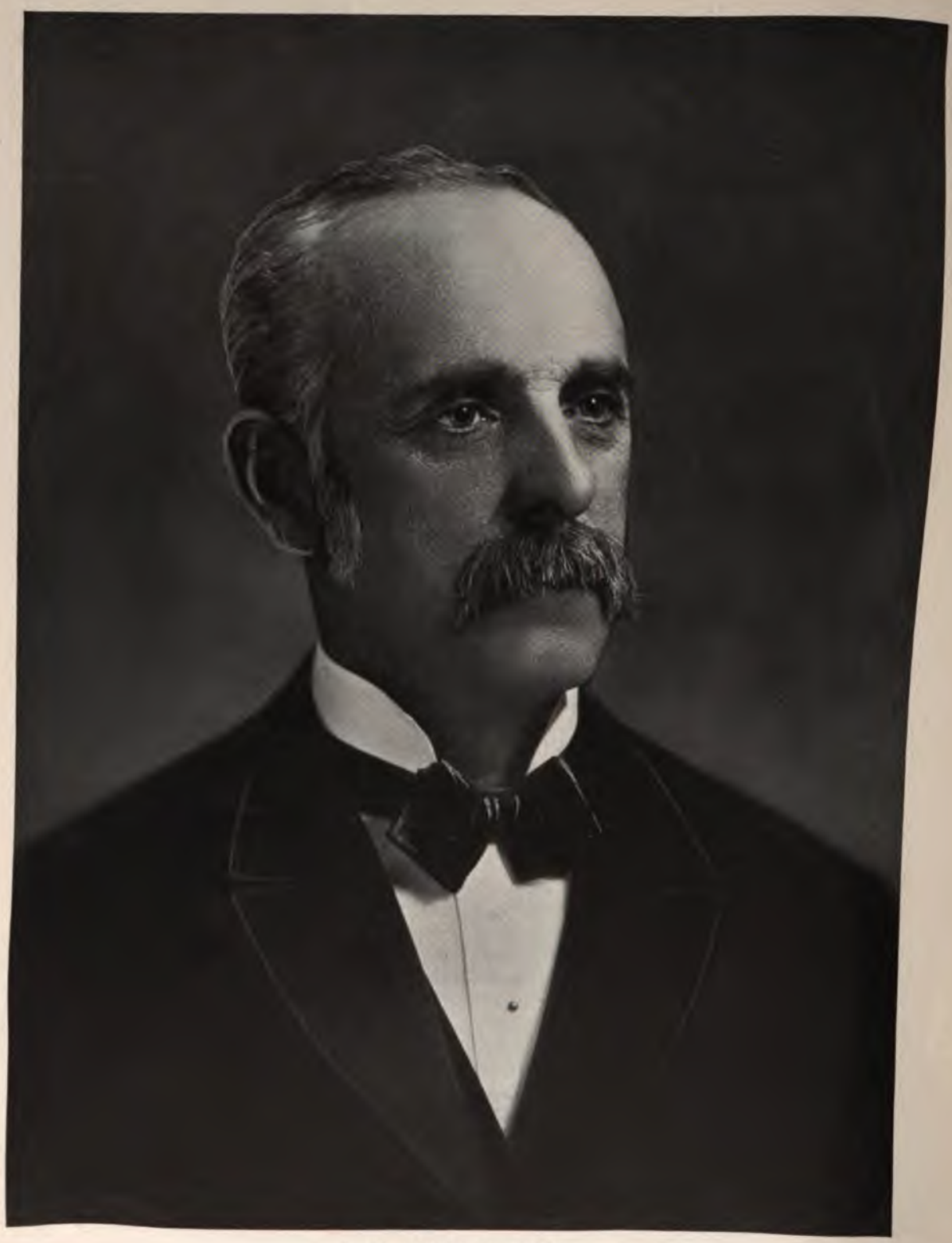
And every year, almost every day, in fact, long-distance transmission of electrical power by wire is causing the utilization of hitherto valueless waterfalls. Even in many remote rural regions villages are now lighted by electricity generated by water-power which formerly ran to waste. There are many such villages in the most remote rural parts of the country where electric light is in very common use in dwellings; and trolley cars run even through sparsely settled regions.

But of such purely practical applications of mechanical principles already well known there is no end. New applications and extensions of old principles are made so rapidly for the saving of labor and for the increase of product, that the public cannot keep informed even of the most important improvements. Almost every man who has to do with mechanical work knows that in his own craft improved methods and improved machinery are constantly giving a better product and often a cheaper one. There is hardly a piece of machinery today that may not be superseded tomorrow; and the rapidity with which new machines take the place of old ones was never so great as now. The American may come to be known in history as the man who improves a machine before he can wear it out. The conservative commercial world has already come to regard almost all machinery as likely suddenly to be retired from service; and on the books of careful manufacturing companies it is valued always with reference to the scrap-pile. The only constant and the only permanently valuable factor in mechanical progress, as in progress of every other kind, is the trained man with a knack for experiment.

A WONDERFUL GENERAL STIMULUS

ALL this activity, both in the practical world and in the world of scientific investigation, has other results than the pushing forward of the bounds of knowledge and of saving human toil and of adding to the length and safety of life and to our convenience and available wealth—there is a benefit beyond all these. It acts as an unprecedented stimulus to men of all crafts and callings. Even in those departments of labor which fall outside the range of the physical sciences, and which inventions touch only indirectly, there is a somewhat corresponding eagerness for progress. To consider the subject in one of its every-day aspects, see how almost all work that touches human well-being is done with increasing effectiveness.

There is no better antidote for despondency than to take a measure of your own community as it was ten years ago and as it is today—unless you live in an unrepresentative and stagnant community. You will be likely to find the roads or the streets better than they were; the railroad service better, the postal service, possibly even the telegraph and the telephone service; you will observe better houses, more attractive grounds; the people are better clad, or more are well-clad. Inside their houses you will find more books or better, more bath-rooms, better lights, and better furniture. A larger proportion of children and youth are receiving good training at better schools. All this means more than prosperous years. It means a higher level of life and a stronger ambition. The well-being of the people of the United States is rising higher and especially is it diffusing itself wider. Life is constantly becoming more comfortable and more cheerful as well as longer and safer—



HON. LESLIE M. SHAW

Secretary of the Treasury

leading to better conditions for intellectual growth and social development.

AMERICAN INTELLECTUAL AWAKENING

THE prodigious activity that the preceding paragraphs give only a dim hint of is only a part of the general widening of our intellectual horizon—the most rapid intellectual development that has taken place in our history. Part of the same quickening is the commercial and political expansion that was described in the preceding number of this magazine. In common with the rest of the world we have of course during the last generation or two suffered the general readjustment to civilization, the readjustment to the universe in fact, that followed the revelations of modern science. But we have done more than that. The widening of man's intellectual scope by the revolutionary contributions of science to our knowledge has had in one way a profounder effect upon American thought and character than upon the thought and character of any other people. The doctrines of social evolution have fortified our social and political creed and strengthened our social structure. Democracy already had a firm foundation in justice and expediency. It now has a scientific foundation as the most rational and the most advanced social organization. The mobility of life in a democracy, too, has enabled individuals more easily to adjust themselves to the new dispensation of knowledge. Ecclesiastical forms, social orders and intellectual traditions have held us in bondage less than they have held any other people. By the general world-wide broadening of intellectual life, then, Americans have profited perhaps more than any other nation.

But we have gone forward into a wider day also on our own account and by reason of our own experience. We have widened our horizon and quickened our intellectual life in ways of our own and for reasons of our own. We have come rapidly during the last half-decade to a clearer national consciousness. This great gain is a subject of everyday observation; and our financial, industrial and commercial rise is the same thing expressed in economic activity. For instance, the determination to cut and to control an isthmian canal marks a great advance in our thought. We might have come to this state of mind years ago if we had then had the habit of looking abroad and of seeing as far as we now see. And so with the whole wide range of our activity. There was no definite economic hindrance to its earlier bursting forth. The whole matter is at bottom intellectual; and the most interesting aspect of it all is the evidence that it gives of an intellectual awakening.

Now in the vocabulary of history intellectual awakenings have generally been measured by the production of great books. But there are other measures of it. The production of great books is the greatest of all arts. But there are other great arts, and there is now science. Great discoveries in science and even the revolutionary applications of science are a fair measure of intellectual activity. Another good measure that the historians of civilization have laid little stress on is the commonplace but significant measure of a general rise in the well-being of the masses. Another such measure, which also is now a commonplace in contemporaneous thought, is the development of great organizations. The same large qualities of mind that built and ruled the Roman Empire now find exercise in industrial and financial undertakings.

As to the outlook for the production of great literature in this period of American intellectual awakening—here we come to ground where the folly of prophecy may disport itself with even more than its usual ridiculous nimbleness. No man can tell. Men cannot even tell which books of contemporaneous production may lay claim to some permanence. But an important part of our intellectual quickening and broadening is the recognition of the fact that literature is not the sole measure of intellectual achievement, as the bookmen in the period that antedated science and colossal industry were wont to tell us. We have other measures of it—none, perhaps, so desirable, but for that reason not the less accurate or significant.

LARGE DIVIDENDS AND CONTINUED PROSPERITY

THE known dividend disbursements in January, 1901, through the larger channels of the New York banks and trust companies were reckoned at one hundred and forty millions; this year they were fully one hundred and fifty millions. These dividend payments are, of course, only an unknown

fraction of the payments made even in New York, not to speak of the whole country. But the rate of increase is thought to be approximately accurate. In other words, through the same channels there were paid ten millions more in dividends last month than a year ago.

Prosperity yet favors us—prosperity at high tide. A short corn crop is the most serious setback of the year, but there is no fear of any appreciable slackening of the tide for this reason. The closing of the Asiatic market to our cotton goods has been felt by some of the textile manufacturers, and there are other local and temporary checks. But the general "good times" remain.

This, too, in spite of the very serious economic depression in Germany. But the German economic depression and the general "law" that all periods of great prosperity must be brief, cause serious men to think. Yet nobody finds good cause for fear—at least for the near future. The hope has arisen, in fact, that the gigantic organizations of industry that have been made within the last few years may, when a strain comes, prove to be regulative machinery which can be used against great depression. A recent census bulletin shows that the products of industrial combinations or "trusts" in 1900 were more than twenty per cent. of the total gross products of manufacturing industries in the country; and many have been organized since the facts were gathered on which this computation was made. Still more powerful, of course, are the financial and transportation combinations. Whether they will prove useful in averting depressions and panics is an interesting theory, and it may be a true one; but it will remain a subject of speculation till a test comes. But, for this reason or for some other, the public seems for the present to have lost its old-time faith in the "law" of recurrent periods of depression. But the prudent man may be pardoned for regarding it as the old sinner regarded eternal punishment—as a myth of course, but a myth so seriously considered by his neighbors as to warrant decent provision against it. The most important consideration is this—whether we have overinvested or are in danger of overinvesting, so that when sharp need for cash comes we may not have it.

The somewhat academic consideration, whether the United States is still a debtor nation, has no direct bearing on the continuance of prosperous times; but the weight of evidence is that we have not yet become a creditor nation. But the United States has for some time shown an excess of exports over imports that amounts to an average of forty million dollars a month. The United Kingdom, Germany and France, for obvious reasons, have an excess of imports over exports. The economic importance of these facts is the reminder they give of the necessity of a large export trade for the maintenance of our prosperity.

THE GROWING DEMAND FOR CORPORATE PUBLICITY

ONE movement is rising in public favor to which every public man may safely hitch his wagon, and which every man may further for good public morals. It is publicity about corporations—voluntary publicity if it come, enforced publicity if need be. Among an increasing number of noteworthy utterances on the subject since the President's message is the message of Governor Nash of Ohio. He would have all State taxes raised from corporations, franchises and the liquor traffic. He recommends with force and directness that the State require every corporation to pay in its capital stock "in money" before it is allowed to be incorporated, and that every one should be required to make annual reports in great detail, "how much of the capital has been paid in, how the money is invested, what the assets are, the amount of liabilities and the names of the stockholders," so that "the people may know at all times whether it is worthy of credit and confidence."

A new industrial company was recently incorporated in New Jersey, and the articles of incorporation make it obligatory on the directors that the fullest publicity shall be practised. Not only are the books to be open to stockholders, but an explicit annual balance sheet is to be made up which shall show every important detail of the business.

It will not be a long while till companies that wish to keep public confidence will have to adopt the policy of specific publicity. It will in all probability turn out that the dreaded damage to business through publicity is a mere bugaboo. The disclosing of profits

to rivals deters many men. But, if the rivals' profits also are known, what harm is done? Whatever the incidental disadvantage of publicity may turn out to be, the rising tide of public opinion is strong in favor of it.

CHANGES IN THE PRESIDENT'S CABINET

THE two changes that have been made in the President's Cabinet have been made with all good feeling and propriety. Governor Leslie M. Shaw, of Iowa, has been received by the country, in the place of Mr. Gage, as Secretary of the Treasury, with hearty approval, and Mr. Henry C. Payne as Postmaster-General, in the place of Mr. Smith, with a milder satisfaction. Mr. Shaw stands for good and resolute public service, and Mr. Payne stands for successful machine management in politics.

Mr. Shaw's rise into political prominence has been swift, and he owes his advancement to his uncompromising advocacy of the gold standard in 1896, when most rising public men in the Middle West held uncertain opinions or were hesitant about committing themselves. Two years later he was elected Governor of Iowa and again in 1900 with a largely increased plurality. Meantime, as the Chairman of the Indianapolis Monetary Convention, he attracted national attention. This is his experience in politics. He has lived, as lawyer and banker, most of his life in the little town of Denison. He is not identified with the great financial interests of the country, but he is acceptable to them, for he is a man of strong convictions. He is the first Secretary of the Treasury to come from a trans-Mississippi State.

Mr. Payne's service in public office was done as Postmaster of Milwaukee. His activity as a member of the Republican National Committee has been much better known to the country; and he is a man of wealth and of energy. He brings executive ability to the performance of his duties.

THE DIFFICULTIES OF TERRITORIAL EXPANSION AND HIGH PROTECTION

THE passage thus far only by the House of Representatives of the Philippine Tariff Bill (which is the Dingley Bill with this proviso, that the duty collected on imports from the Philippines is to be paid into the Philippine treasury) was thought to be justified by the necessity of quickly settling the question of the tariff on goods imported from the islands after the decision of the Supreme Court made the Dingley tariff inoperative without special legislation. But there has been a moral rebound in public opinion. An analysis of the measure reveals a cloven foot in its generosity to the Philippines. It is our purpose to build up the islands. For this reason we pay to them the duty that we collect on their imports into the United States. So far so good. But, if we wished to make this source of income for them as large as possible, we should reduce the duty; for the Dingley tariff discourages importation. To give only a single instance: While we admit our tobacco to Manila on the payment of a very small duty, we should under this bill admit Manila tobacco into our ports only on the payment of a duty many times as great. We "protect" ourselves against them.

It is a constantly narrowing strip of firm ground betwixt the devil and the deep sea that we have to stand on; for we are protectionists, but we are also guardians of these island wards. If we yield our protectionist principles the heavens will fall. If we become faithful guardians of these islanders, we shall have to "sacrifice" something or somebody. The most embarrassing paradox of recent history was the coming of the party of high protection into "imperialistic" responsibilities. But the matter is not yet settled. Much more comprehensive legislation touching the whole government of the Philippines is now on the calendar, and is likely to be passed before Congress adjourns.

The bill that passed the House establishes in the Philippines the rates of duty that the Commission has had in operation, alike for imports from the United States and from all other countries, as by international obligations we are bound to do.

ECONOMIC RELIEF FOR CUBA

THE economic relief of Cuba is our bounden duty, and economic relief means a reduction of duty on Cuban sugar and tobacco. President Roosevelt called a substantial reduction a "vital need"; and "we are bound," he said, "by every consideration of honor and expediency to pass commercial measures in the interest of her material well-being." But the best explanation of

the situation and necessity has been made by Secretary Root. Nothing could be more admirably said:

"The peace of Cuba is necessary to the peace of the United States; the health of Cuba is necessary to the health of the United States; the independence of Cuba is necessary to the safety of the United States. The same considerations which led to the war with Spain now require that a commercial arrangement be made under which Cuba can live."

And President Palma of Cuba has said:

"I will ask, with every expectation of the request being granted, that a reasonable reduction shall be made in the duty on sugar and tobacco, the two staples of Cuban agriculture. If this reduction is granted the prosperity of Cuba will be immediate and great. If it is denied it will mean ruin. There will be $500,000,000 employed in the sugar and tobacco industries, all of which will be lost if the American door is closed. The fields of Cuba will be desolated, and the sugar mills will be ruined just as thoroughly as they were by the Spanish incendiaries."

The American market, it so happens, is the only market that Cuba has for sugar, because the bounty-encouraged beet sugar of Europe supplies the European demand at a low price. Doubtless it is unfortunate that the island depends so entirely on two staples; but for the present it does depend on them and for an indefinite time it must. It may be unfortunate, too, that economic philanthropy, if any one prefer the phrase, must have a place in our dealing with the new republic. But it is not quite clear that it is philanthropy. It is more like simple economic justice.

Sugar and certain grades of tobacco grow better in Cuba than they grow elsewhere; and we do not grow enough sugar to supply our demands. The Louisiana planters and our beet-sugar growers fall short of it by much. The question, then, is whether we shall force Cuba, as far as any country can be so forced, to grow sugar at a loss for the protection of our own sugar growers. Cuba cannot long do so. Good economics and good morals coincide here as they usually do.

The Cuban sugar product in 1899 was 308,000 tons, in 1900 it was 615,000 and the crop of last year is estimated at 800,000, for which a market must be found or the chief industry of the island will fall back to the poverty-stricken condition of the last years of Spanish oppression. As our tariff now stands ($1.68½ a hundredweight on raw sugar) the cost of production, freight to New York and duty is a little more than four dollars per hundredweight—which is less by twenty-five cents per hundredweight than the price in New York for which raw sugar sells.

It is worth recalling that the tariff on raw sugar was removed by the Republicans in 1890, and was restored in 1894 for purposes of revenue only. We no longer need the revenue. Besides, the consumers of sugar in the United States have some rights in the matter; and the reduction of the duty on the Cuban product, while it will encourage Cuban prosperity, will at the same time make the cost of living to the people of the United States cheaper by many millions of dollars a year. But, beyond all other considerations is this—that this economic relief is a necessary corollary to our political relief of Cuba. After a bitter struggle in Congress, a reduction (such, at least, is the outlook now) may be made. But the ultra-protectionists, the Louisiana sugar planters and the beet-sugar growers will not surrender easily.

THE MOST IMPORTANT POLITICAL SITUATION

IT is not too much to say that the political situation in New York is more important than any other in the United States. Mayor Low has begun his administration with perhaps the strongest, cleanest, and most efficient men as the heads of the great departments of the city government that ever took such a task in hand About the practical success of the administration itself there can be no doubt. Its efficiency, its earnestness, its dignity give the right-thinking citizens of the city a new sensation.

But danger to permanent good government comes out of this very feeling of satisfaction. The mayor has no compact and permanently organized party behind him, and political control on a large scale has, under our system, usually been kept only by a compact and permanently organized party. It is impracticable and undesirable and impossible to organize and to keep in active existence a citizens' machine modeled after the usual party machine. The argument for permanently defeating Tammany by out-Tammanying it—by organizing a stronger machine—is

unsound. Wherein would such a machine permanently better our condition? A compact and permanent machine of the "gentleman class," if it were possible to make it, would not permanently rule New York better than Tammany has ruled it. Its sins would be of a different kind, but in the end they would not be less heinous. The only permanent cure of our great municipal ills is to dispense with machines of all sorts. There is no substitute for individual civic pride and individual civic activity.

Of course, a Citizens' party must be kept alive and an active inter-election organization must be maintained. But such a party is not and must not become a machine. The purpose of the Citizens' Union to keep its organization and to have headquarters in every assembly district is wise, and these headquarters should be used as machinery for keeping the voters frankly informed about municipal management. But this form of activity is not all that is necessary.

Day by day and year by year the citizens of New York go about their business as if they lived in a foreign land. They do not think and they do not talk about the government of the city, nor do they inform themselves about it. They leave the conduct of public affairs wholly to the men in power. They do not even read with interest the news about the city administration—that's a routine matter for which they have no time. After the first period of self-congratulation is passed they leave Mayor Low and the other public servants with scant thought of their work. The routine is resumed. They continue to say, when the subject is presented, "Yes, praise God, we have a good city government now"; and they fall into the mood of fatal satisfaction.

Yet the great fact stands—that if New York in this period of its abounding prosperity, during its rapid growth toward the distinction that awaits it of becoming the foremost city in the world, does not make it clear that a great city in a democracy can rule itself, the cause of good municipal government will be held back for generations. We shall still suffer the reproach that a democracy is not equal to the demands in government made by modern urban development. We shall still suffer the reproach that self-government is a failure in urban life.

At no period of our political history have we had a more important problem than this. For the experience of New York City during the next few years will show whether the civic spirit that has made and kept our Federal Government and most of our State Governments reasonably clean and efficient is equal to the task of good municipal government.

A CITY OF SOJOURNERS

IT is a question that cannot be solved only by city officials, however efficient they may be, nor only by political organization. In its last analysis it comes back to the individual citizen. So large a part of the men who live in New York regard the city not as a home but as a place of sojourn—this is the trouble. They live in hotels; they occupy apartments; they spend half the year in the country; or they are dwellers in tenements, who frequently move from one part of the city to another or from one suburb to another. New York does not suggest home to half the dwellers in its crowded cliffs. It suggests work; it suggests "business." And it is somebody else's business to attend to politics. This feeling tells the whole story of the individual lapse from civic duty. Municipal politics has been "a business" in the worst sense of the word.

Given a city, then, full of sojourners, many of whose real citizens catch the sojourner's mood, how can a sense of real citizenship be built up? The patriotic impulse that elected Mr. Low and the patriotic influences that are now alive must be turned into permanent educational forces of civic duty. All directly didactic methods have their influence—work in the public schools, free public lectures, the newspapers, the clubs and other organizations for stirring civic pride. But all these together are not enough. There must be a permanent awakening of the adult commercial population, and there must be a strong social force exerted. So long as "society" is content to amuse itself and so long as "business" is content to enrich itself, the danger of Tammany's return to power is imminent and real. There is no permanent safety except in the character of the men of voting age, and there is no substitute for individual civic character and individual civic activity. The duty is personal. Every man must do it himself.

FOR A PARTY WITHOUT SPOILS

MR. WILLIAM DUDLEY FOULKE, of the National Civil Service Commission, declared in a recent after-dinner speech in New York that we had thoroughly demonstrated in our party history the disadvantages of spoils to any political party that receives them. The truth of this remark is obvious. It has been proved over and over again. But it is one of those clearly proved principles that are not accepted because they are demonstrated. Huxley once wrote in humor and in sadness that in early life he had thought that when a man clearly proved a proposition it would be accepted—a conclusion that he had long ago been obliged to abandon.

A political organization that has no office within its reach, except such high elective offices as are necessary to carry out its principles, is immensely stronger than a political party that has appointive offices to be given for zealous work; and (what is more important) it preserves its strength longer. Especially is this true in municipal politics. Just as soon as men who work with earnestness to set up good government receive what the public regards as personal rewards for their work, the moral force of what they have done is weakened. The point of this is—that the task of maintaining a high level of municipal government in New York, as elsewhere, but in New York in particular, must fall to men of whom Mr. Robert Fulton Cutting and Mr. W. H. Baldwin, Jr. are types—men who do not seek office.

Nor is this to say any word of criticism of good men who do accept office; for good men must accept office, else the fruits of victory would never ripen. But the good men who are selected for office ought not to be those who may be thought to have worked for their personal advancement. This doctrine is not transcendental politics. It is the only good working doctrine, practical to the very core, essential to continued succes. It means simply throwing moral force into political work and into party management and keeping it there. "The cohesive power of public plunder" is at bottom a fallacy, just as "honor among thieves" is a fallacy. These venerable falsehoods may seem true for the moment; but the whole history of honesty and patriotism shows that they are essentially false. Civil service reform has two great lessons. One is that it improves the public service, and that lesson we have learned. The other is that it strengthens political parties, for a party is stronger if it have no spoils. This lesson is not so easily learned. But Mr. Croker, the Tammany Boss, confessed it in his retiring speech.

HOPE FOR THE END OF AN UNHAPPY CONTROVERSY

A REASONABLE hope is—and the public prays that it may so turn out—that no further official action will be taken in regard to the Schley controversy. The Rear-Admiral stands acquitted of cowardice, of which no considerable body of public opinion ever accused him (it is doubtful whether there be a cowardly man in the navy; and, if there be, it is not Rear-Admiral Schley), but the court of inquiry leaves him under its judgment convicted of disobedience, dilatoriness, and lack of enterprise. It is reasonably certain that naval opinion will continue to hold this judgment, for this has been the predominant naval opinion ever since the war. It is quite as true that Rear-Admiral Schley's friends regard him as a persecuted hero. No verdict could change either of these opinions.

Without doubt the President has the hearty approval of the public for his vigorous efforts to bring the whole controversy to a rest. No sooner had the Court of Inquiry rendered its verdict than he directed the dismissal from the public service of the historian who had written that Rear-Admiral Schley's conduct was cowardly, and he directed that a rebuke be administered to General Miles for expressing an opinion on the subject. These were acts of discipline that were in accordance with precedents and regulations, and they indicate the President's wish to end the whole unhappy matter. He has consented to hear Admiral Schley's appeal, which is interpreted to mean that the President will decide whether there is good legal reason for further official proceedings of any sort; and he has permitted it to be announced that he will veto any Congressional resolutions on the subject. All this seems to make for the preservation of the army and navy from further humiliation by the unhappy incident; for whoever has suffered by it (and everybody concerned with it has suffered) it is certain that the navy has suffered greatly. The sooner the controversy

can be dislodged from the public mind the better for all naval officers, and for the good of the service and of the country. It is to be regretted that State Legislatures, which surely are not high naval authorities, continue to adopt resolutions on the subject. Nor does all this add to the public esteem in which the navy ought to be held.

THE TWO ISTHMIAN CANAL ROUTES

CONGRESSIONAL progress toward work on an isthmian canal may suffer some delay because of the definite offer by the French Panama Canal Company of the unfinished Panama Canal for forty millions of dollars instead of more than one hundred millions, the price at which it was first held. The Hepburn bill provides for the use of the Nicaragua route. It authorizes the President to secure control of the necessary way from Costa Rica and Nicaragua and, that done, to direct the Secretary of War to proceed to cut the canal, and it authorizes contracts to the amount of one hundred and eighty millions of dollars. The Isthmian Canal Commission, it will be recalled, recommended the Nicaragua route, but chiefly because of its cheapness. But this advantage disappeared as soon as the French Panama Company reduced its price to forty millions. If we pay only forty millions for it the Panama route will be a little cheaper. The Commission's estimate was one hundred and eighty-nine millions for the Nicaragua route and two hundred and fifty-three millions for the Panama route. But the latter estimate now becomes one hundred and eighty-four millions after the reduction of the price.

Which is the better and whether the Senate will do well to reopen the question before passing the Hepburn Bill which has already passed the House—these are questions that the engineers and the Congressional committees have in hand; and in the meantime the laymen who speak through the newspapers have turned engineers and are belaboring the patient public mightily.

Some of the facts presented by our Isthmian Canal Commission, of which Rear-Admiral Walker is chairman, are these: the Nicaragua route is 190 miles long, including 59 miles across Lake Nicaragua; the Panama route is 47 miles. The Nicaragua route is 500 miles shorter from North American Atlantic to North American Pacific ports; but the Panama route is 400 miles shorter from North American Atlantic to South American Pacific ports. The Nicaragua Canal can be completed sooner, but it will cost about $1,300,000 a year more to maintain. Harbors would have to be constructed at each end of the Nicaragua route; and there are already good harbors at each end of the Panama Canal. Of course, there are other questions than questions of cost. A clear title to the Panama route is essential for its consideration.

Whichever be the better from an engineering point of view, the main matter that the public is interested in is that there shall be no unnecessary delay. Congress has time, if it feel so disposed, to accept either route. That it accept one or the other and show no delay is the important matter.

THE CONCILIATION COMMITTEE OF THIRTY-SIX

THE meeting of many influential employers and representatives of labor that was held in New York City in December, at the call of the National Civic Federation, did a good piece of work. They had a frank discussion during which everybody spoke his mind freely about labor disputes. So many men of influence, as labor leaders and as employers, never before met for such a purpose. A Committee of Thirty-six was appointed, twelve employers, twelve labor leaders and twelve eminent citizens, namely, Mr. Cleveland, Mr. Charles Francis Adams, Archbishop Ireland, President Charles W. Eliot, Mr. Oscar S. Straus, Bishop Potter, Mr. James H. Eckels, Mr. Franklin MacVeagh, Col. John J. McCook, Mr. John G. Milburn, Mr. Charles J. Bonaparte, and Mr. Cornelius N. Bliss—men who are not dreamers or makers of theories, but who do things and stand for something. The twelve representative employers include Senator Hanna, Mr. Charles M. Schwab, Mr. S. R. Callaway, Mr. John D. Rockefeller, Jr., Mr. Lewis Nixon; and the leaders of organized labor include men of corresponding importance, such as Mr. Gompers, Mr. John Mitchell, Mr. Frank P. Sargent—every one representing an important body of workers.

The character and influence of the committee is the first thing of importance. Next is the great good sense shown by the plan they

made. They do not propose to arbitrate unless both parties to a controversy request them to do so. But they stand as a committee of conciliation. Their very existence is an invitation to deliberate action. It will, as a whole or by a sub-committee, when requested "act as a forum to adjust and decide upon questions at issue."

Almost immediately the committee had an opportunity to use its good offices with effect in settling a difference in New York which threatened to become a strike, involving 40,000 workers, between the Clothing Manufacturers' Association and garment-makers. The conciliation was brought about by frank discussion and by mutual concessions.

A NOVEL EXPERIMENT IN INDUSTRIAL TRAINING

AN interesting variation of the endowment of our colleges is the reported purpose of M. Le Baudy, a Frenchman, to establish at the University of Chicago an industrial school for French youth. The plan, as it has been given out, is to send there graduates of schools in France for training in American industrial methods. Apart from the compliment to American methods, this experiment will for many reasons be interesting.

It is a fair matter of speculation whether the thing that the French philanthropist would have his young countrymen learn be a method of work or a trait of character that is peculiar to Americans. Is American industrial skill a thing that a man who does not become an American is likely to acquire? By the time an American learns a craft it is superseded or modified by machinery. So, too, with methods. The thing of value is the quality of victorious adaptability to new conditions. It is not fair even to hint of a doubt of the success of this interesting experiment, and surely the youth of any race or country may receive invaluable instruction in an industrial school in America. But whether American industrial methods are translatable into French character is an irresistible and engaging speculation. How large a part of American success is institutional rather than individual it would be interesting to know. A Frenchman adopting American methods and living here—that is easy; but a Frenchman carrying American methods home with him—we shall see. In the meantime M. Le Baudy may make sure of American coöperation in his generous purpose, and his young countrymen will be most heartily welcomed if they come to learn of us.

GERMANY'S GRAVE PROBLEMS

THE commercial depression has served to embitter the discussion over the new tariff, which, although it has the approval of the Emperor and easily passed the Bundesrath last July, has had to fight every inch of its way through the Reichstag. The Agrarian party, largely made up of land-holding nobles and the peasantry, having succeeded in making a bargain with the Imperial Government, by which they are to receive a higher tariff on agricultural products, have been put to great efforts to defend the policy. The Socialists, led by Herr Bebel and others, have attacked it violently. They make the most of the assertion attributed to M. de Witte, the Russian Minister of Finance, that if Germany shall enact a tariff hostile to Russia's agricultural interests Russia will retaliate against German manufactures. Public meetings have been held in Berlin to protest against any increase of taxation on the necessaries of life. The Socialists' petition against the bill has over three million signatures. Chancellor von Bülow says that the bill has been drawn up after years of careful study with three main objects in view—to give increased protection to agriculture, to provide industry in general with a remedy for the defects caused by the former tariff, and to obtain for the Empire a better weapon in negotiating commercial treaties with other countries. The bill, opposed probably by a great majority of voters in the whole country, has a majority in the Reichstag, which was elected in 1897, in the midst of Germany's prosperous years.

German sentiment against England continues strong; it is a combination of three strands—first, the common Continental dislike of the supercilious Briton, second, jealousy of a commercial rival and, third, real sympathy with the Boers. Chamberlain is still the principal butt of insult and derision. The English retaliate by putting side by side with this compassion for struggling freedom Prussian severity toward the Poles. Last May at Wreschen (in that slice of Poland which Prussia grabbed in one of the partitions) school children refused to receive re-

ligious instruction in German. Fourteen of the refractory were caned; parents and friends aided and abetted the children, and twenty-two of them were put in prison. One grandmother, over eighty years old and ill, who used strong language to a schoolmaster who had whipped her grandchildren, was sent to prison in chains. At Posen Polish students were accused of contributing to a "Polish national treasure," with the ultimate purpose of obtaining independence for the Polish provinces of Prussia and of reëstablishing a Polish kingdom. Condemnations and long sentences followed. Indignation meetings have been held wherever there are Poles. Prince Radziwill is leading the outcry in the Reichstag, and Sienkiewicz, the novelist, that in the newspapers. In Russia and Austria Poles are combining to boycott German goods. The bottom of the trouble is that Prussia intends to convert Poles into Germans, just as in Alsace-Lorraine Germany has been converting Frenchmen into Germans. The subject of German or Polish language in the schools of Prussian Poland is old. In 1842 it was decreed that the language taught should be that of the majority. In 1872 it appeared that the German language had lost ground, and schoolmasters were ordered to use it except for religious instruction. Until this year, however, the rule was laxly enforced. Now the Government is strict and extends the rule to include the catechism.

THE GERMAN ACKNOWLEDGMENT OF THE MONROE DOCTRINE

MUCH as we have talked on this side the Atlantic about the Monroe doctrine, it has not till now been openly conceded by any European nation. The much-discussed "doctrine" is nothing but a declaration of purpose on our part—a purpose that has become, especially by reason of recent events, a convenient guiding principle to our diplomacy. It has, of course, been considered by European Powers, but it has not before been openly conceded as a right to us. No Power has ever entered into an agreement not to take any American territory for colonization. Now comes Germany, however, before proceeding (by force if need be) to collect debts to Germans from Venezuela, and in effect acknowledges the doctrine by first making a courteous explanation to us of her intentions, and specifically disclaiming any purpose of acquiring territory in Venezuela.

This incident comes at the same time as the abrogation of the Clayton-Bulwer treaty, by which the English Government had certain joint rights with us on the Isthmus. The Monroe Doctrine, therefore, is, if such fortification were needed, more strongly fortified now than it ever was before.

This is not a diplomatic incident of dramatic importance, but its value as a courtesy from Germany and as a precedent is considerable. It is significant, too, as a triumph of courteous methods in diplomacy. The German Government was not formally bound to make any explanation of its purpose, and we should have had no right to make objection to its forcible collection of debts from Venezuela. But the explanation happily relieved us of all possible doubt. The courtesy that the Emperor has shown to the United States by inviting the daughter of the President to christen a yacht that American shipbuilders are constructing here for him is an incident of less importance, but a pretty incident none the less, and his brother's visit to America at the same time serves the same purpose. On such things pleasant international relations thrive.

THE EXTRAORDINARY SOCIAL AND ECONOMIC CONDITIONS IN FRANCE

THE old bugbear of a stationary population stalks in with the recent census. For years France has had a birth-rate lower than that of any other Great Power, but now for the first time native-born Frenchmen are actually diminishing in numbers; in the year 1900 deaths exceeded births by 25,988, and immigration only kept the total population stationary. Meantime the indebtedness of France is increasing faster in proportion than that of any other European country. During the last 25 years, while the whole indebtedness of Europe increased $4,000,000,000, France's share increased $1,800,000,000, so that the national debt per capita in France is nearly $160, while in the rest of Europe it is only about $70. The per capita taxation in 1901 was nearly $20, and the deficit was about $70,000,000; yet there is general confidence; for instance, the deputies, mindful perhaps of the next general election, passed

a bill granting to all railway employees a ten-hour day, which will cost the State about $15,000,000 a year. French thrift maintains French wealth. Moreover, the wine crop, including that produced in Algeria, is, with the exception of last year's extraordinary vintage, larger than any for 20 years. Its estimated value is nearly $200,000,000. Manufactures do well, shipbuilding and the motor-car industries are very successful. Otherwise, too, French affairs prosper. The storm raised by the Associations Law, which compelled religious corporations to take the same position before the law as secular corporations, is subsiding. Some Catholics have taken the position that the Church gains more than it loses. The agitation against the law seems to have been largely political.

The repugnance of Frenchmen to emigrate is shown afresh by the census returns from Algeria, where the French population, numbering 292,000, only exceeds the rest of the foreign population by 1,000, although France has owned Algeria since 1856, and the native population since that time has increased from 2,307,000 to 4,071,000.

Frequent complaints are still heard against the occupation of Egypt by the English, who are accused of violating law and treaty; and some enthusiastic citizens of Paris are making an effort to support the French school of technology in Alexandria in the hope of preventing the French language and French influence in Egypt from being crowded out by the English.

RUSSIA'S STEALTHY AND STEADY ADVANCE

RUSSIA has never forgotten the lesson learned in the Crimean War. Determined to expand and increase her power and empire, she is resolved to make no more frontal attacks. Steadily and stealthily she proceeds on her imperial way. She knows that the sea confers the sceptre of empire. Having reached out to the Pacific, she is giving blarney to Japan until she shall be in a position to dispense with Japan's friendship. She is also reaching seaward toward the South. Her influence is predominant in northern Persia; but unsatisfied, she betrays (at least to English suspicions) an intention to acquire ports in southern Persia—Bandar Abbas or Chahbar—at the mouth of the Persian Gulf, for the sake of a sphere of influence in the Arabian Sea. This occupation, a flanking position as Captain Mahan calls it, would threaten the connection between England and India; and, as it appears to serve no commercial purpose, may well look to that end, but, perhaps, it is only an instinctive movement towards the waters of the earth, for Russian statesmanship has long aims. Possibly also she entertains a hankering for a passageway into the Mediterranean. A number of fast cruiser transports have been lying idle in the Black Sea. Sebastopol is in excellent defensive order; its docks and arsenals are well equipped, ready to fit out ships of war. Rumor suggests that these ships may portend trouble with Japan, but it is more likely that Russia only proposes to be ready in case some European commotion shall give her the opportunity to sail through the Bosphorus and Dardanelles, and cast anchor in the Mediterranean.

New light has been shed on Russia's relation to Armenia, and explains perhaps one of the difficulties in the way of European intervention on behalf of the Armenians. Some forty thousand Armenians, in order to escape Turkish persecution, have fled across the border into the Transcaucasian provinces of Russia, which are thinly settled. Russia proposes to naturalize these immigrants, willy-nilly, make soldiers of them for a time, and then put them to the development of agriculture, thereby in her thrifty way turning an honest penny out of Turkish cruelty.

The condition of the peasants in the Caucasus, between the Black and Caspian seas, has been very hard; their crops have failed and the Turks will not suffer them to migrate south into Asia Minor. They have been obliged to leave home in search of work and bread. There is famine also in Asiatic Russia; petitions for official proclamation of famine (a preliminary to official relief) have been made by twenty-seven districts and granted in twenty-two. Over $5,000,000 worth of grain has been sent by the Government to the needy districts. The crop failures have affected manufactures. In and about Odessa, which is the principal city on the Black Sea, the metallurgic industry has felt the depression; and in the spinning districts of Russian Poland the number of failures has induced the Government to give State aid in the form of loans.

Tolstoi is said to be in good health, living with friends in the soft climate of the Crimea. Whether he is writing "The Corpse," or what else, he refuses to tell.

ITALY

ITALY'S industrial condition has improved. The Minister of Finance announced that the budget showed for last year a surplus of $8,000,000, and intimated that there would be a large surplus for the coming year. The floating debt has been reduced and the receipts under every branch of revenue indicate increased prosperity. On the Paris bourse Italian bonds, which yield four per cent. net, have risen to par, the best price they have ever attained. This is particularly satisfactory when we recall that in bad times Italian bonds have been quoted very low—in 1866, 40; in 1871, 50; in 1894, 72; in 1896, after the defeat in Abyssinia, 78; and that the deficit in the budget for 1888-9 was between forty and fifty million of dollars. Wages are low, but continued emigration helps to maintain them. The emigration to the United States in the year ending June 30, 1901, was 137,807 or 35,861 more than in the previous year.

Persistent rumors of the Pope's near death, rumors due to his great age rather than to ill health, and vigorously denied, give rise as usual to speculation about his successor. There are said to be two parties in the College of Cardinals, one attached to Cardinal Rampolla and the policy pursued by Leo XIII, and the other which finds fault with that policy in some respects and puts forward, or rather, gathers around Cardinal Vannutelli, who is pointed out as the candidate of the Triple Alliance or, as it is also put, of those Governments who desire a more pliant pontiff. Another rumor whispers that Cardinal Gotti is the Pope's choice. He is a Genoese, a friar of the barefoot Carmelite order. His only experience out of Italy was a mission to Brazil in 1892, and he is seventy-eight years old. What would be the most interesting candidacy for America, and perhaps the best in the world, is never mentioned except by a few Americans in secret, that of Archbishop Ireland. He has not yet received the cardinal's hat; so careful and so hesitating is the wise old church in bestowing her approbation on non-Italian opinions.

Gabriele d'Annunzio continues to be the foremost figure in the world of Italian art and literature. His new play, *Francesca da Rimini*, was given in December at the opera house in Rome. The house is too big for a theatre, and the play was better adapted for a literary audience than for theatre-goers. The audience was divided into friends and foes, approving and disapproving the play and each other with Southern vivacity. To make up for this harsh treatment the city of Rimini has presented to Eleanora Duse a laurel wreath, and to d'Annunzio the freedom of the city. D'Annunzio has been invited to be the representative of Italian literature at the celebration to be held at the Pantheon in Paris in honor of Victor Hugo. The other representatives are Gerard Hauptmann from Germany, Kipling from England, Gorky from Russia, Galdos from Spain, and Van Verhaeren from Belgium.

THE FIRST PRESIDENT OF CUBA

THE Cuban election for presidential and senatorial electors and members of the House of Representatives and governors of provinces on January 1st resulted in the choice of electors who will cast their votes on February 24th for General Tomas Estrada Palma for President and Dr. Luis Estevez, once Secretary of Justice in General Wood's cabinet, for Vice-President of the Republic. There was practically no opposition at the polls, General Maso, the opposing candidate, having withdrawn; but there were partisan expressions of dissatisfaction. General Palma was called by his political enemies the American candidate and the candidate of the bureaucracy; but the best evidence is of at least acquiescence if not satisfaction.

General Palma may properly be called the American candidate in this sense—that he accepts the settlement of the whole Cuban question that was brought about under the Platt resolution. For this there could have been no other choice of a President so fit. He is a Cuban by birth and a lawyer by early training. His father was a rich planter in the Province of Santiago when the so-called Ten Years' war against Spain began in 1868, and his property was confiscated and his wife was killed. Young Palma enlisted and attained high military rank, and he was at last chosen President of the provisional government of the island. After nearly nine years' fighting he was carried to Spain as a prisoner;

he refused to swear allegiance to Spain as the price of freedom, but when the insurrection ended he was released and he came to the United States. He soon went to Honduras, where for a time he held important public positions, and married a daughter of the President of Honduras. He returned to the United States, and made his home at the village of Central Valley in New York, where he has kept a school for Cuban boys. He has not been to Cuba for twenty years.

In 1895 he became the head of the Cuban Junta in New York, and did energetic service against Spain. He was elected the first President of the Cuban Republic without an effort on his part. He is now sixty-six years old, and he is a man in whom the conservative citizens both of Cuba and of the United States have confidence. On the day after his election he said:

"The principal object of the Cuban Republic should be, first of all, to secure the most friendly relations with the American people, who helped us in our hour of need. We will always bear in mind the work of the United States in helping us to obtain our independence from Spanish rule. At the same time we should try to secure from the Washington Government all the advantages possible for our products by reasonable reductions of the import duties, especially on sugar and tobacco, as this is the only way for Cuba to escape the absolute ruin of these two industries, which are the bases of its actual wealth."

The sulking and dissatisfied party, whose leader is General Maso, has the possibility of mischievous opposition—not open opposition of the American kind but rather the sort of treachery which is often the Latin-American method of opposition.

THE COST OF TRAINING CHILDREN AND OTHER ANIMALS

IN moments of self-righteousness we are accustomed to think, if we think about it at all, that we pay the teachers in the public schools as much as their services are worth. Teaching, we say, like any other commodity, brings what the condition of the market determines. If any teacher give up his place a dozen others quickly apply for it. The salary, therefore, is enough; else there would not be such an eager demand for places. And this reasoning is sound. Teachers are got for the salaries that are now paid. Teachers could be got for half these salaries. However low the salary, it could be cut in two and still teachers could be got.

But this purely commercial statement does not touch the most important question. Many public school teachers do now receive all they are worth—many, no doubt, receive more than they are worth. The question is not what a teacher can be got for, but what the best teacher can be got for. How good teachers do we propose to have? There is no doubt that by doubling the salaries now paid any community could improve its schools beyond easy computation; for a higher grade of efficiency would go into the profession.

The truth is that many, perhaps most, communities are really not yet in earnest about public education. They have provided schools and teachers; and there they are resting. The next great movement forward must be to build up the teachers' profession to the degree of dignity that corresponds with an enlightened view of it. It is the least mercenary of all callings, but it can never be as dignified or as efficient as it ought to be and as it must become, except on the conditions so admirably explained by Mr. McAndrew in his article in this magazine. Mr. McAndrew has given years of patient labor and an invincible moral earnestness to the agitation for higher salaries; and, so far as the influence of this magazine goes, it will stand with him and with those of like mind and purpose till public school education comes to have a new meaning. To insist on proper pedagogical methods and on the proper coördination of studies is well enough, and it is well to build better school houses and to equip them better; but the foremost need is of more capable men and women in the schoolroom. A great teacher makes a great school; but most men and women who might become really great teachers are not now in the public schools because they cannot afford to be. We yet entrust our children to less skilful training than any other highly bred animals.

THE ISLANDERS

BY

RUDYARD KIPLING

"Early in January, 2,000 . . . are to be enlisted and mobilized. . . . The men are to be sent to Aldershot in batches of 500 for eight weeks' training."

". . . So the Cape Government asked the Colonel to come home and secure suitable men for his regiment."

". . . Any form of compulsory service being impossible among a free people."

". . . 1,728 head of game falling to four guns. Thanks to careful and scientific attention, the — moors were never in better condition."—Daily Press.

". . . My fifteen months out here have made me fairly keen on compulsory service for all England. It is simply awful that after two years you send us out men who have to be taught to shoot and ride. It's like expecting a Board school boy to play in a county eleven."—Private Letter.

FENCED by your careful fathers, ringed by your leaden seas,
Long did ye wake in quiet, and long lie down at ease;
Till ye said of Strife:—"What is it?" Of the Sword:—"It is far from our ken";
Till ye made a sport of your shrunken hosts and a toy of your armèd men.
Ye stopped your ears to the warning—ye would neither look nor heed—
Ye set your leisure before their toil, and your lusts above their need.
Because of your witless learning and your beasts of warren and chase
Ye grudged your sons for their service and your fields for their camping-place,
Ye forced them glean in the highways the straw for the bricks they brought:
Ye forced them follow in byeways the craft that ye never taught.
Ye hindered and hampered and crippled: ye thrust out of sight and away
Those that would serve you for honour and those that served you for pay.
Then were the Judgments loosened; then was your shame revealed,
At the hands of a little people, few but apt in the field.
Yet ye were saved by a remnant (and your land's long-suffering Star),
When your strong men cheered in their millions while your striplings went to the war.
Sons of the sheltered city—unmade, unhandled, unmeet—

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"The Islanders," Mr. Kipling's stirring poem that has set the whole British world astir, was published in the London *Times*; and it is republished in full in the United States in THE WORLD'S WORK, by the special permission of Mr. Kipling, who holds the copyright also for the United States; and all rights are reserved.

Ye pushed them raw to the battle as ye picked them raw from the street.
And what did ye look they should compass? War-craft learned in a breath?
Knowledge unto occasion at the first far view of Death?
So! And ye train your horses and the dogs ye feed and prize.
How are the beasts more worthy than the souls you sacrifice?
But ye said:—"Their valour shall show them"; but ye said:—"The end is close";
And ye sent them comfits and pictures to help them harry your foes.
And ye vaunted your fathomless power and ye flaunted your iron pride
Ere—ye fawned on the Younger Nations for the men who could shoot and ride!
Then ye returned to your trinkets; then ye contented your souls
With the flannelled fools at the wicket or the muddied oafs at the goals.
Given to strong delusion, wholly believing a lie,
Ye saw that the land lay 'fenceless and ye let the months go by;
Waiting some easy wonder: hoping some saving sign—
Idle—openly idle—in the lee of the forespent Line.
Idle—except for your boasting, and what is your boasting worth
If ye grudge a year of service to the lordliest life on Earth?
Ancient, effortless, ordered, cycle on cycle set—
Life so long untroubled that ye who inherit forget
It was not made with the mountains; it is not one with the deep.
Men, not Gods, devised it. Men, not Gods, must keep.

Men, not children, servants, or kinsfolk called from afar,
But each man born in the island broke to the matter of war,
Soberly and by custom taken and trained for the same;
Each man born in the island entered at youth to the game—
As it were almost cricket, not to be mastered in haste,
But after trial and labour, by temperance, living chaste.
As it were almost cricket—as it were even your play—
Weighed and pondered and worshipped and practised day on day.
So ye shall bide sure-guarded when the restless lightnings wake
In the womb of the blotting war-cloud and the pallid nations quake.
So, at the haggard trumpets, instant your soul shall leap
Forthright, full-harnessed, accepting—alert from the wells of sleep.
So at the threat ye shall summons—so at the need ye shall send

Men, not children or servants, tempered and taught to the end.
Cleansed of servile panic, slow to dread or despise,
Humble because of knowledge; mighty by sacrifice.

But ye say:—"It will mar our comfort." Ye say:—"It will 'minish our trade."
Do ye wait for the spattered shrapnel ere ye learn how a gun is laid?
For the low red glare to southward when the raided coast-towns burn?
(Light ye shall have on that lesson, but little time to learn.)
Will ye pitch some white pavilion; and lustily even the odds
With nets and hoops and mallets, with racquets and bats and rods?
Will the rabbit war with your foemen—the red-deer horn them for hire?
The kept cock-pheasant keep you? He is master of many a shire.
Arid, aloof, incurious, unthinking, unthanking, gelt—
Will ye loose your schools to flout them till the browbeat columns melt?
Will ye pray them or preach them or print them or ballot them back from your shore?
Will your workmen issue a mandate to bid them strike no more?
Will ye rise and dethrone your rulers? (Because ye were idle both,
Pride by insolence chastened? Indolence purged by sloth?)
No doubt but ye are the people; who shall make you afraid?
Also your gods are many; no doubt but your gods shall aid.
Idols of greasy altars built for the spirit's ease;
Proud little brazen Baals and talking fetishes;
Teraphs of sept and party and wise wood-pavement Gods—
These shall come down to the battle and snatch you from under the rods?
From the gusty flickering gun-roll with viewless salvoes rent,
And the pitted hail of the bullets that tell not whence they were sent.
When ye are ringed as with iron, when ye are scourged as with whips,
When the meat is yet in your belly and the boast is yet on your lips
When ye go forth at morning and the noon beholds you broke—
Ere ye lie down at even, your remnant, under the yoke.

No doubt but ye are the people—absolute, strong, and wise;
Whatever your heart has desired ye have not withheld from your eyes.
On your own heads, in your own hands, the sin and the saving lies!

A NEWSPAPER WITH MANY FUNCTIONS

THE WONDERFUL BUENOS AYRES *LA PRENSA* WHICH IS A FREE DOCTOR, LAWYER, LIBRARY, FORUM, HALL, MUSEUM AND HOTEL — THE STORY OF ITS BUILDING

BY

BERNARD MEIKLEJOHN

A NEWSPAPER editor from the Argentine Republic, who made a little while ago a short visit to the United States, was not in the least impressed with two things of which we are proudest—the enterprise of our newspapers and the philanthropy of our citizens. In his own city of Buenos Ayres, he is familiar with a newspaper philanthropy unmatched in the world—is, in fact, editor-in-chief of a paper that not only has the most magnificent newspaper building in existence, but also gives more to the public than any other journal known. This man, Señor Ezequiel P. Paz, edits *La Prensa* (*The Press*), the greatest newspaper in South America, owned by his father, Dr. J. C. P. Paz, formerly Argentine Minister to France, and a man who has done what no other journalist has done. In Buenos Ayres and, in fact, throughout the Argentine Republic *La Prensa* is not only a newspaper, but a free doctor, a free lawyer, a free library, a free forum, a free hall, a free museum, a free hotel for distinguished foreign visitors.

The paper began as humbly as any of the ten other Spanish newspapers of Buenos Ayres in 1869, with J. C. P. Paz as editor and sole owner. It ran along not unsuccessfully until 1874, when the owner became so involved in the revolution of that year that he had to flee, an exile, to Montevideo in Paraguay. A meritorious service, as Ambassador to France, during which he nurtured his great plan, followed his return. Finally seven years ago he sent Carlos Agote, a well-known engineer, to visit the great newspaper plants in the world—in New York, in London, in Paris; simultaneously Alberto de Gainza, architect, went to work on the building. Gainza was to erect a magnificent building; Agote was to see that a newspaper plant installed in it was as good as any in the world. This task he carried out by ordering Hoe presses and other American machinery, as, for example, six passenger and five freight elevators; even to ink and paper, the equipment of *La Prensa* has been furnished in the main by American firms. In 1896 the building was finished at a cost of $2,000,000 gold. Instead of making money in the newspaper business and founding with it a hospital, a library or a college, Dr. Paz with his wealth housed his newspaper in splendid apartments in a building too vast for a newspaper alone, and instead of renting the rest of the building, after our fashion, he established in it the museum, the library, the reception chambers for foreign visitors, and the other features that make *La Prensa* such a marvelous institution. He himself stood in the background; it was not he that was doing all this—it was *La Prensa*.

The paper is an eight-page journal with the inside pages devoted to news and the outside pages to advertisements. The establishment is at first glance an imposing gray marble structure, standing on the finest boulevard in the city. Towering nearly 200 feet above the pavement is a colossal figure of golden bronze, by Thiébault of Paris, representing *La Prensa* (*The Press*), holding in her hand a lantern—"like your Statue of Liberty" said Señor E. P. Paz. During the Boer war a yellow light flashed from the lantern—visible many miles from the city—meant a British victory; a green light meant a Boer victory—with resultant cheering from the Argentines, who are violently pro-Boer. The statue stands on a tower just in front of a glass roof which covers the courtyard around which the structure is built. This courtyard fills one of the im-

THE PALATIAL DINING-ROOM

portant functions of the paper. In political crises or other times of public excitement the gates are swung wide open, and into the court pour the people—as many as wish, up to 2,500—for a public demonstration. From the second-floor balcony Dr. Paz or his son addresses the crowd, replies to petitions, and sometimes promises in succeeding issues of the paper to make the ears of the Government tingle, unless the legislation is adopted which the people demand; for politically the paper is independent.

On the ground floor are the business offices, a luxuriously furnished consulting room where the poor may get free legal advice, a free medical consulting room and a free museum. The chief physician with five assistants attends an average of 110 patients a day from noon

LA PRENSA'S HOME

THE MUSEUM OF ARGENTINE PRODUCTS

to midnight. The museum, much like our Philadelphia Commercial Museum, is devoted to the exhibition of Argentine products and manufactures, from a sheaf of wheat to a pair of boots; and connected therewith is a chemical laboratory where such work is carried on as the analyzing of soils for farmers. Any citizen may have this service free.

On the second floor are the luxurious offices of the proprietor, the editor, and the editorial writers. Instead of a corner, a worn desk, a pot of paste, an inkwell and a nail for his hat, an editor has the use of gorgeous drawing-rooms, smoking-rooms, a billiard room —such equipments indeed as make life a sort of editorial paradise. On the same floor is a hall that serves as Saint Paul's in London once served or the Roman Forum: here political meetings may be held, business may be transacted, in short, the people of Buenos Ayres use the room freely. Near it is a quiet chamber that shows somewhat touchingly that Dr. Paz has not forgotten the days when in exile he studied law at Montevideo: surrounded by well-filled bookshelves stored with legal, medical and engineering books, the poorer students of the city haunt the room every day —usually thirty or forty of them—from one o'clock to six and from eight to ten, acquiring a professional education. On this floor, too, is a school where Spanish is taught.

Distinguished foreigners visiting Buenos

THE DRAWING-ROOM OF THE EDITOR-IN-CHIEF

THE SALON FOR DISTINGUISHED VISITORS

THE REPORTERS' DINING-ROOM

THE FREE LIBRARY

Ayres will find on the third floor the most wonderful feature of the establishment—a palatial suite of apartments for their reception. Racovitza, the explorer, was entertained here in the gorgeous dining-hall, on his voyage in search of the South Pole with Captain Gerlache. Woolf, the naturalist, lived a fortnight here. And in the future when any great foreigner stays for a time at Buenos Ayres, he will find ready for him this copy of European palaces; his wife will have at her service a parlor canopied in blue silk, hung with tapestries of blue silk, made bright with candles stuck in candlesticks of Dresden china, and glittering with furniture ornamented in imitation Dresden. Other details of the apartments almost match this, even the *Salon des Fêtes*, a great hall where literary, charitable or scientific meetings or entertainments may be held at the hospitable invitation of *La Prensa*. Among the gorgeous apartments in the building this one is perhaps the most widely known,

THE SANCTUM OF SEÑOR E. P. PAZ

for it is an accurate copy of the drawing-room at Fontainebleau. The idea of Dr. Paz in providing such apartments, namely to glorify his city by providing a luxurious habitation for visitors, is something quite new in modern civic patriotism.

On the top floor are the composing room, the reporters' room, a restaurant and a fencing salon. Fencing is popular in Buenos Ayres, to such an extent indeed, that it seems good to Dr. Paz to maintain a master for the benefit of his reporters who indulge in guarding and

THE EDITOR'S ANTE-ROOM

lunging three times a week under tutelage. Opening from the reporters' room is a restaurant where meals are served at cost to the twenty-five reporters and the six men on the editorial staff. At one o'clock in the morning, moreover, tea or coffee is served free to everybody in the establishment from the printers to the editor-in-chief; and if any stray urchin happens to be loitering in the "Boys' Exchange" in the basement where the newsboys buy and exchange papers, no doubt he, too, gets his cheering cup.

La Prensa has a circulation among the 800,000 people in Buenos Ayres and throughout South America of 100,000. Its price is about three cents in our money. Its highest advertising rates are four dollars and a half an inch. Its treasurer's report for the first six months of this year showed gross receipts of $1,033,905.47 in our money, and expenses of about $650,000. Among the expense items appeared $280,000 Argentine (or about $140,000 gold) for paper, bought from a New York firm, and $86,390 Argentine (or about $43,000 gold) for cable service. From the profits the magnificent establishment is supported—not such a heavy task as might appear at first blush, when one recalls that the chief splendors of *La Prensa* figure simply in the first cost: the doctors, the lawyers, the chemists, give but a part of their time to the paper, for small pay: Dr. Paz has interested them in his undertaking. The building costs no more for maintenance than one of our office buildings. "My father" said Señor E. P. Paz, "does not desire great wealth. What he has been able to acquire beyond a sufficiency has gone into *La Prensa*."

THE COURTYARD

THE LEGAL CONSULTING ROOM

ONE OF THE LARGEST OF PUGET SOUND RED FIRS

Which are considerably smaller than good sized Big Trees

Photographed by Kirk, Everett

THE BIG TREES OF CALIFORNIA

THE OLDEST LIVING THINGS — SURVIVORS OF THE MIOCENE PERIOD AND WITH AN AGE OF PERHAPS 5,000 YEARS — SCARCELY 500 VERY LARGE TREES LEFT — THE DANGER OF THEIR COMPLETE EXTINCTION

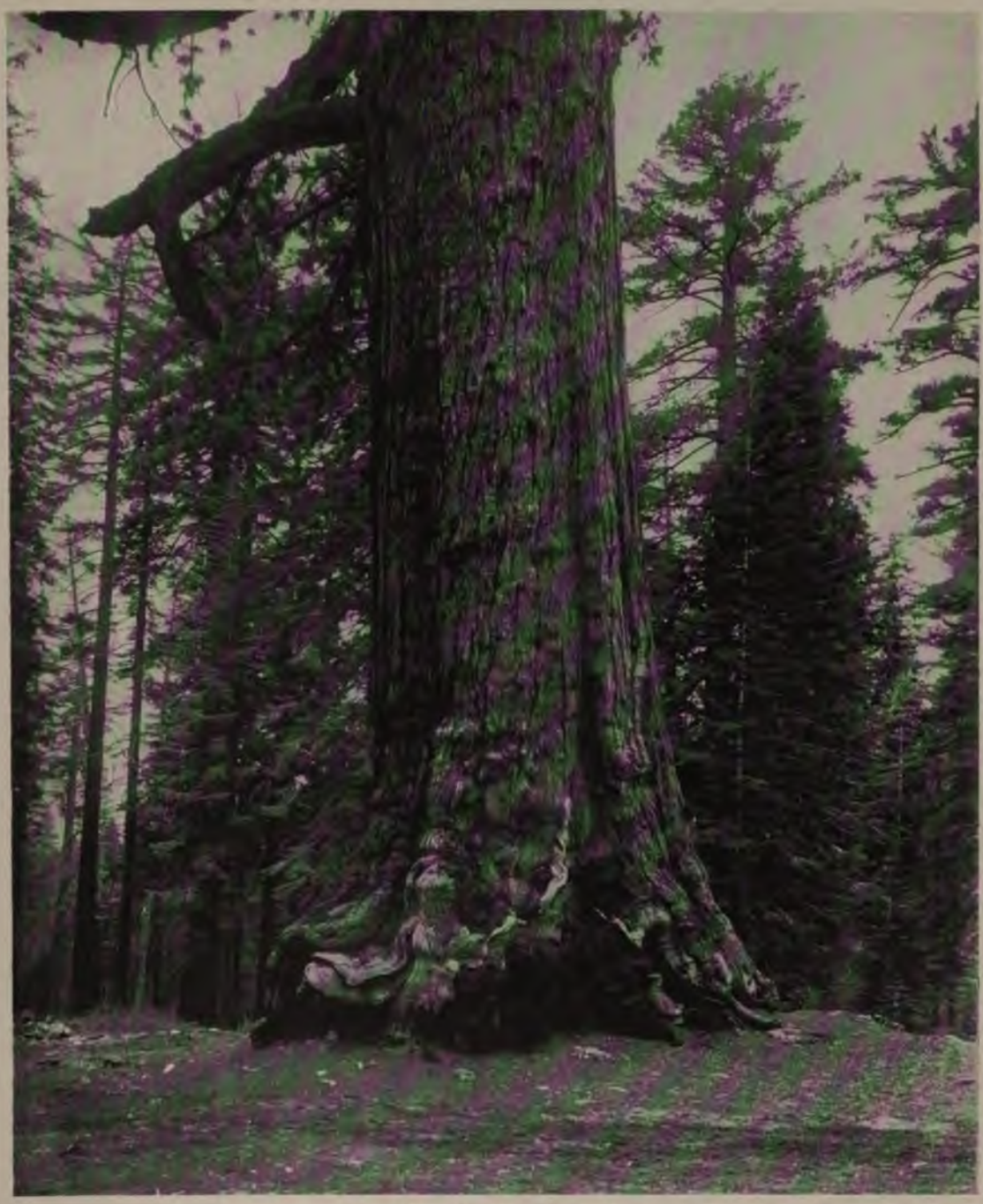
BY

RICHARD T. FISHER

[The facts of this article were collected for a report prepared in the Division—now the Bureau—of Forestry of the United States Department of Agriculture. The Big Tree photographs are copyrighted by the Southern Pacific Railroad and were taken by Mr. H. C. Tibbitts.]

WHEN, about the middle of the last century, the Calaveras Grove of Big Trees was discovered in California, and notes and specimens began to get into the hands of botanists, it was found that science had made a great acquisition. The species, it appeared, (with its cousin the Redwood) had no close relatives upon earth. It was somewhat like the Bald Cypress of the South and somewhat like the Incense Cedar of the West—superficially at least, and from one naturalist it did actually receive the generic name of the Cypress, *Taxodium*. But when it was compared with various forms of fossil conifers, it turned out to be a bona fide species of the genus Sequoia; and it was named, after some uncertainty, *Sequoia washingtoniana*.

Now, the Sequoias are a very old family. Far back in the mysterious moist days of the Miocene period, when vegetation throve exceedingly, they covered great areas both of Europe and America far up toward the Pole. Then came that enormous visitation of ice and the hosts of growing things dwindled before it, some to complete extinction, some to a modified existence as fossils, and others to an all but inappreciable portion of their former range and numbers. This last was the fortunate case of the Sequoia. When the ice receded to its present limits two species, the Coast Redwood *(Sequoia sempervirens)* and the Big Tree, or at least their immediate ancestors, were left stranded on just about the two small islands of space which they now occupy.



IN THE MARIPOSA GROVE

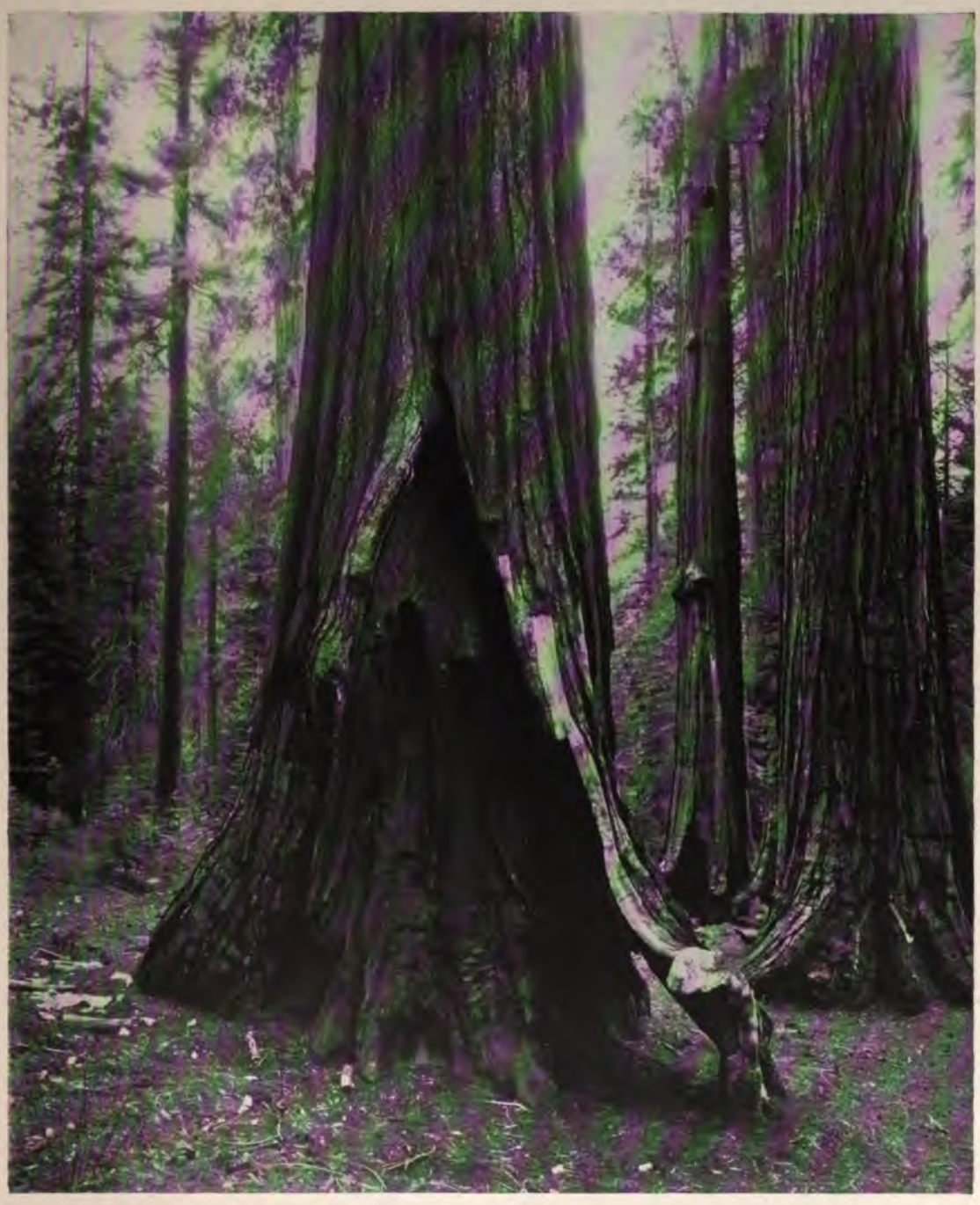
Showing the "Grizzly Giant," 64 feet 3 inches in circumference at 11 feet from the ground

In these specially favorable localities, old-fashioned and few though they were, they held their ground through all the intervening thousands of years; so that today they have the distinction of being altogether the most impressive, and almost the only survivors of a previous geologic age.

Aside from the scientific value which this record gives the Sequoias, it lends the rest of their story a truly dramatic atmosphere. One is prepared to believe strange things of such time-honored and hardy trees. To begin with, there is their curiously, wonderfully restricted range. California is traversed up and down by the steep ridges of the Coast Range and the great central fold of the high Sierra. In the seaward gulches, slopes and ravines of the first stand the forests of the Redwood, and from just over the Oregon line to Point Sur in Monterey County they thrive only so far inland as the sea fogs habitually sweep—scarcely twenty miles. On the broad western slope of the second, here and there in sheltered valleys, scattered through the timber belt of the region, stand the ten separate areas or groves of Big Trees which are all that exist in the world. From a little company of six individuals in Southern Placer County to the southernmost Sequoia on the Tule River it is but 260 miles. There is the original Calaveras Grove, the Stanislaus, the Tuolumne, the Fresno, the Dinky, which contain but a few hundred trees apiece, and there are tracts on Kings and the Kaweah Rivers and on the Tule which contain some thousands of trees apiece; but the whole series put together could not muster more than a few hundred thousand sizable trees, and of those far and away remarkable for size, scarcely five hundred.

A BIG TREE FELLED AND PEELED

For a setting the Sequoias have a moun-



A BIG TREE SCARRED BY REPEATED GROUND FIRES

THE BIG TREES "GRANT" AND "SHERMAN"

In the Calaveras Grove, showing the typical open-floored forest in which they grow

tain forest of singular richness and grandeur. Like all the forests of the Pacific slope, it is evergreen, and its special charm is its spacious and decorative interior. The stand is not densely, monotonously massed, as with the firs of Washington, but spaced more generously and unbounded by such an even canopy of tops. The Pines usually rise clear boled into distant crowns; the Firs and Cedars merge more swiftly into spires of green, and below on the clean, dry ground, strewn with cones and needles or crossed with a giant windfall, cluster occasional clumps of the big flowering Dogwood, pungent Ceanothus or the little conical thickets of young Firs. In such goodly company by small groups or single trees, here and there among Sugar and Yellow Pine, Firs and Cedars, themselves marvels of size, stand the great cedar-like Sequoias. Two hundred feet and over is a common height for the pines and one hundred and seventy-five for the firs; yet in the Calaveras Grove the great dome-shaped crowns of the Big Trees surmount the neighboring treetops sometimes by a full hundred feet. A Sugar Pine ten feet through is a rare tree; yet there are Sequoias in the Mariposa Grove which are approximately thirty feet through and a great many between ten and twenty. The secret of their monstrous development appears to lie in enormous vitality inherited, it would seem, from the ancient family. Mr. John Muir, who in his "Mountains of California"

IN THE MARIPOSA GROVE
A Grizzly Giant in full view

"COLUMBIA"

Showing the characteristically fluted and buttressed base of a perfect Big Tree

FELLING A BIG TREE

When the "undercut" is finished the trunk is sawed through from its opposite side

has written most vividly of the Big Trees, and who is probably as familiar with their nature and habits as any one, says that "barring accidents, they seem to be immortal." How old they get to be is not exactly settled, for careful ring-countings from the largest trees have not yet been reported; but Mr. Muir mentions a felled tree that was found to be twenty-two hundred years old and another that had succumbed to winds at the age of four thousand. These figures agree thoroughly with the latest investigations, and it is not unlikely that individuals may be found to be five thousand years old. Part of this extraordinary longevity is due, of course, to the Big Tree's own vigor and the favors of the climate, but part also is due to its natural immunities. In most Western forests, and no less so in those of the Sierra, many trees are killed by fire and fungus. The first eats out butts or sweeps through crowns or bakes the soil, and the second lodges in broken limbs or tops or scars in the bark and gradually rots backward into the wood; but the Sequoia, though it is very commonly burned out at the base, has a thick, fibrous bark which is all but fireproof, and without which the innumerable visitations of the past would certainly have destroyed it. In the same way the wood is practically impervious to decay. Fungus is said to be unknown to it, and even old windfalls, burned and scarred and exposed to every sort of evil influence, have lain sound for hundreds of years. Individually, Sequoias are indeed almost imperishable.

But for all their superb strength, the Big Trees show some of the signs of a waning family. So far from being disposed to stock new areas with seedlings, they are not even reproducing their own groves with anything like profusion or completeness. In the Calaveras tract, beyond a few trees some forty years old, there is said to be no evidence of increase. The same is true of most of the other groves, except the stands on the south fork of the

GALEN CLARK

Who discovered the Mariposa Grove

Kaweah and the Tule Rivers, where there is young growth in abundance and of every age. Unfortunately, however, this exceptional region will not suffice to hand down the species, inasmuch as the mother trees, whose protection is so important to the survival of the young ones, seem in a fair way to be cut down.

Such indeed is the chief danger of this distinguished species. By far the greater number of the Big Trees are held in private ownership, usually by lumber companies of which about fifty are at work, at least in part, upon Sequoia timber. Government holdings include the Sequoia and General Grant National Parks, of 161,280 and 2,560 acres respectively; but between them they contain 1,172 acres of valid private claims, probably located in the heart of the best timber, besides a saw-mill apiece; so that, being rather hard to reach, they are not wholly adequate as parks. The one grove thoroughly secure is the Mariposa, which is owned and protected by the State of California. It is conveniently visited by tourists to the Yosemite Valley, and it possesses some very large trees. The only trouble is that it is much damaged by fire, and that it does not possess the most valuable collection of Sequoias. The finest of them, certainly the tallest and best preserved, are commonly conceded to be in the Calaveras Grove. Ever since its discovery this has been gathering fame and picturesqueness. Travelers and naturalists have written about it, tradition has grown upon it, and all the while the primeval forest as the first American beheld it has stood and flourished undisturbed. The beautiful Sierra underwood, and the generations of young Pines and Firs have kept their natural places uninjured either by fire or grazing. For the first owner of the tract, Mr. J. L. Sperry, guarded his property with a wise care. But about a year ago Mr. Sperry sold his grove to a lumberman. Immediately agitation in California and elsewhere was set on foot to recover it and insure its perpetuation as a park. Resolutions were passed and petitions were

TROOPERS ON A FELLED SEQUOIA

signed, and the result was that, late in the session of the last Congress, a bill was introduced and passed, by the terms of which the Secretary of the Interior was authorized to find out the price for which the Calaveras Grove could be bought. The bill carried no appropriation, and the grove is still unpurchased. Which means that the best, as well as the greater part, of the California Big Trees are still in danger of disappearing.

It is inconceivable that such a fate will be allowed to befall them. The Big Trees are the oldest of living things, the largest and among the rarest, majestically formed and surrounded and famed besides for their geologic past. As international wonders they could scarcely be rivaled. Surely these, of all trees, might fairly claim the protection of science as well as sentiment. They are not particularly valuable as timber, being soft and brittle, and their bigness makes logging them a wasteful and destructive business. In falling they sometimes go all to pieces, commonly shatter themselves nearly a third of the way down from the top, and of the log that is saved the larger part has often to be blasted apart before it can be moved. The tree is only fit for small lumber at best, and considered as an investment for the State it would yield more as a living curiosity than a dead woodpile. The Big Trees in the Mariposa and Calaveras Groves are visited by hundreds of people every year. At this rate it is not difficult to imagine how soon stage fares, hotel bills, guide fees and so on will outweigh the price of a few thousand grape sticks. And yet, on the other hand, whatever else they are, the Calaveras Big Trees, like all the rest, are marketable timber, and as such, if at all, they will have to be bought.

"THE BEST GOVERNED COMMUNITY IN THE WORLD"

THE AMBITION OF MAYOR TOM L. JOHNSON FOR CLEVELAND, O.—WHAT HE HAS DONE TO BRING REFORMS—HIS PLAN TO TAX AND THEN TO MUNICIPALIZE FRANCHISES—HIS POLITICAL PHILOSOPHY—HIS METHOD OF ADVANCING IT—TRAITS OF A STRONG CHARACTER

BY

FREDERIC C. HOWE

WALTER BAGEHOT, with his keen insight into democratic institutions, has observed, in speaking of Sir Robert Peel, that the successful constitutional statesman is the man of "common opinions and uncommon abilities." He is the sort of a man whose opinions are those of the street; who does not stray too far in advance of the current of popular opinion. He is a man of whom the average person will say that he is safe and sound. In much the same way Lord Palmerston once commented on a member of the English Ministry—that he did something that he was not compelled to do, a most uncommon proceeding in a statesman.

Mr. Tom L. Johnson, the mayor of Cleveland, is not this type of man. His opinions are as uncommon as his abilities, and most of the things he does are things he is not compelled to do. And he does not wait for public opinion. He makes it, and, if necessary, breasts the waves which break about him.

Some time ago in a public meeting he resented being termed a "reformer." A reformer, he said, was like a crab, because he goes backwards. And under whatever name he may bear, Mr. Johnson is not going backwards. His ideas and achievements are revolutionary, radical, or just, according to the temperament of the onlooker.

Like Mr. Joseph Chamberlain, Mr. Johnson became a successful politician after he had become a successful business man, and the career of the present Colonial Secretary of

England as councilor and mayor of Birmingham offers many analogies to the mayor of Cleveland. Mr. Johnson frankly admits that his wealth came from special privileges; that these privileges were public franchises, government patents, and the protective tariff, and that he does not believe in any of them. The protective tariff he strove to abolish while in Congress; and as for public franchises, he would tax them, and, eventually, bring them under public ownership. As to the special privilege of private ownership in land, he would destroy this by the single tax. In his opinion, the present inequalities of wealth are largely traceable to special privileges, privileges acquired as free gifts from society and used under the powers thus acquired for personal profit. With these abolished, the worst economic evils of the day would remedy themselves by the free and unrestrained power of competition, and the country would adjust itself to a higher industrial and social plane.

Mr. Johnson does not discuss the fundamental principles of his philosophy. Possibly he has none, save a devotion to the principles of the single tax; and to the adherents of this idea the philosophy of Henry George alone is enough. But if it is possible to gather his political religion from his public utterances, it would seem to be the religion of justice. His attitude on privileges, as well as on the question of taxation, is but a corollary of this principle. For special privileges are a derogation of the equal rights of all in favor of a few.

Mr. Johnson is a strong man and he has overcome the greatest obstacles to success. To him the struggle for existence is natural, and it seems easy. The means of relief is greater freedom in the operation of nature's laws. And by conviction he has become the foremost exponent in America of the teachings of Henry George. Because of his belief, his life to many is a paradox. Identified by tradition and class instincts with wealth and conservatism (for he was born of an old Kentucky family), his political views have always been opposed to the means by which his wealth was created. In his youth he was employed in a subordinate capacity by a street railway company in Louisville. From that position he became an operator in similar properties in Indianapolis; and while still a very young man became an important factor in the Cleveland Street Railway situation. There he acquired a controlling interest in railways of apparently little value, which he developed by shrewd maneuvering into a system of commanding importance to the other urban lines. When the time for consolidation arrived, he was so fortified as to secure a large interest in the consolidated properties, and to be an influence in the management of what is known as the Big Consolidated Railway. Since that time, with his brother Albert, he has operated railways on a large scale in the city of Brooklyn and the city of Detroit, and through the reorganization of street railways in these cities he has become a rich man. It is with this intimate knowledge of the street railway situation that he became mayor of Cleveland upon a platform of lower fares and ultimate municipal ownership. Even on the basis of private management, Mr. Johnson is a believer in low fares; and he says that he demonstrated while operating the railroads in Detroit that as much money can be made out of three-cent as out of five-cent fares; for a corresponding increase in traffic follows any reduction in rates, and any loss is made up by the great increase of short hauls and the wider dispersion of that portion of the population which now either walks to its work, or lives, through necessity, in the neighborhood of its employment.

Cleveland has always been a storm centre in political matters. Probably no city in America contains a constituency more radical on industrial lines. The voting population is inclined to be independent, and a long agitation of franchise management has awakened the public to a full appreciation of the values of such properties. When Mr. Johnson declared in favor of municipal ownership, he adopted a platform with which the public were already familiar and which sounded in no sense revolutionary to the less conservative members of the community. By that he does not mean the acquisition of these properties at their present market value, which is many times the figures represented by the actual investment or the physical property. Ohio is fortunate in having limited franchises, and those of the street railways in Cleveland have but from three to thirteen years to run, some of them maturing in 1904. The immense volume of "water" in the stock of these companies must first be reduced by taxation and

a lowering of fares. When that is done, or on the expiration of the franchises, the city can step in and take possession of the property at a fair valuation. Ultimately, Mr. Johnson thinks the street railway service should be free. Years ago toll roads were almost universal, and the highways of the country were obstructed by keepers who exacted a tax for permission to use them. Advancing civilization has seen their abolition. So, as time goes on, the railways will be maintained and supported by public taxation as a means of facilitating transit throughout the community. They are but part of the highway, an accessory existing for the same purpose as the streets themselves.

For the present, however, Mr. Johnson believes the chief object of municipal concern should be to see the equitable and proper taxation of such properties, the acquisition of the roadbeds, and, if advisable, the operation of the roads themselves for the municipal well-being. He does not believe in exacting profit from such industries, but the service should be rendered at cost.

To the conservative mind such suggestions are revolutionary, but the cultivated and well-to-do classes have ever been as fearful of catching revolution as an old woman of catching cold. To the argument that municipal operation will offer increased opportunities for machine politics, Mr. Johnson replies by pointing to the Brooklyn Bridge, which has been operated for years and been perfectly free from political or machine control.

And Mr. Johnson is a devoted advocate of the single tax. With the introduction of this system he believes many of the industrial ills of the day would disappear, while the inequalities of taxation would be eliminated and the entire burden of government would be laid upon that fund which is the creation of society and not of individual labor. It is probable that the campaign for tax reform which was carried on in Ohio last fall had this ultimate object in view. But it is to be achieved without violent alteration of existing conditions and through the avenue of local option in taxation. This is to be obtained by legislation permitting each county to raise its revenues in any way it sees fit. The revenues of the state are to be collected from enumerated sources, as corporations, licenses, fees and the like. With each community empowered to assess such property as it chooses for local purposes, the burden of introducing any single reform which is supported by a small body of determined men will be greatly simplified. And it is to the attainment of local option and the proper taxation of public service corporations that the present dramatic and vigorous campaign in Ohio was waged.

The local campaign in Ohio for the Legislature was also waged along tax lines. National issues were ignored, and this issue together with that of reformed and direct primaries, municipal home rule and local option in taxation were the rallying cries. And the legislative campaign was carried on in a unique manner. The meetings were held in a large tent, which was moved about from one part of the city to another. To these meetings the Republican candidates were invited to defend their position. National politics were not discussed. By the adoption of such tactics public interest and curiosity were aroused and maintained. The county, though strongly Republican, went Democratic by a large majority.

Immediately after Mr. Johnson's inauguration a "Tax School" was inaugurated for the purpose of correcting the inequalities in real estate valuation. A number of experts were employed, and what is known as the Somers method of valuation was adopted. It was contended that taxation, like any physical force, follows the line of least resistance, and that the large corporations, being able to engage eminent legal talent, in large measure escape at the expense of the small property holder. It was to correct these inequalities that the work has been carried on. Just what the outcome will be is yet doubtful, owing to questions of a legal nature which have arisen, and which are now before the courts.

Mr. Johnson has been mayor for so short a term that his achievements can yet hardly be enumerated. For public changes come slowly. On his inauguration he announced a liberal policy toward saloons, but adopted a vigorous one toward those which were disorderly. Instead of raiding them a policeman in uniform was placed at the door, and the name of every person who entered was taken down. The result was that rough or disorderly places were closed up or the nature of their business was changed. Police raids have been discontinued. Only in rare instances

have arrests been made, and these were for the enforcement of the policy adopted and not for the purpose of revenue. Police court fines in most cities are but a guarantee of non-interference for a given time. They are so regarded by those who are fined, and aside from the unfortunate publicity given, the opportunity for blackmail and the like, they make the city a participant in vice and lawlessness.

In those administrative matters which are social rather than political Mr. Johnson's ideas are very pronounced—to some minds dangerous. Upon his accession to office he found the City Workhouse, to which are committed all persons guilty of misdemeanors or petty offenses, filled with persons who had been committed because of the non-payment of fines. Many of these were first offenders. Others were detained from thirty to sixty days while working out their sentences. Mr. Johnson termed this imprisonment for debt, a punishment for being poor. While the well-to-do were able to pay their fines and go free, a man who was merely a suspicious character, or who had been arrested for intoxication or some other minor offense, was separated from his family and kept in durance for a long time, with the strong probability that upon his release he would be less able to support himself and much more dangerous to society than at the time of his arrest. Since then there has been what many people consider a wholesale jail delivery. Great numbers of men and women (more than 300) have been released after an investigation of their offenses, and less than twenty, a comparatively small percentage, have been recommitted, thus demonstrating that they were detained not because they were inherently vicious, but rather because of misfortune.

A like liberal spirit has characterized his administration of the park system. Several play grounds have been established in the most thickly congested portions of the city, while in the parks themselves, golf, baseball, tennis and all sorts of manly sports have been encouraged. "Keep-off-the-grass" signs have been abolished, and the children have the fullest and freest access to the turf. The idea of public baths has received his endorsement, as well as the extension of the small park idea into the crowded portions of the city.

In the Public Works Department, a system of cleaning the streets by direct labor, by the "white-wings" system, has been adopted, while a radical departure has been inaugurated in the Water Works Department of reducing rates and installing universal meters. By the latter plan it was urged that great economy in the consumption of water would be brought about and the city saved millions of dollars in extensions to the pumping machinery, water mains and the like.

It is a fortunate thing for a large city to have an executive who can think in large figures. The average public official becomes embarrassed when his mind is called upon to contemplate sums in more than four units. His experience has been limited, and public matters involving large expenditures and large ideas find him wholly at sea. Mr. Johnson's experience has been with big things. In consequence, it is possible for him to adopt and carry out plans, which, to other men, would seem too large or too hazardous for a city to undertake. The city of Cleveland is about to erect a number of large public buildings. The opportunity was appreciated by many of so grouping and harmonizing these structures that a splendid architectural effect would be produced. This involved the expenditure of large sums of money, and after the public committees appointed to report upon the subject had reached the limit of their own ideas, Mr. Johnson advocated a larger and more comprehensive plan which would lead to the destruction of a considerable area between the business centre of the city and Lake Erie, and the development there of a magnificent Court of Honor which would be a standing monument to our civic institutions. This matter has been energetically taken up, and if legislative aid is secured, it may be carried to a successful completion.

Mr. Johnson is a man of genial personality. If life has been a serious business with him, he does not show it. He seems able to encompass great results with little effort and to be wholly indifferent to obstacles. In fact, he does not seem to know what obstacles are. Somehow they vanish before his logic or his engaging manner. His firmness is the firmness of persuasion rather than of force, and his achievements are the result of a generous graciousness towards others and of a willingness to seek and to accept the coöperation of anyone who will work in harmony with him.

He can hardly be said to possess a style of oratory, although he is a graceful, forceful speaker. It has been said that you might as well try to extract a nail by hitting it on the head as to convince men by argument. Mr. Johnson convinces men by suggestion, by the Socratic method of drawing an idea out of another man's mind as his own.

Altogether, the chief executive of the city of Cleveland is one of the most interesting figures in contemporary political life. He has appreciated that the great field of present political endeavor lies in our cities; that this is the weakest part of our political system; and that in this arena the greatest good can be achieved and the surest political preferment secured. But if the latter ambition is his, he has been indifferent to ordinary political traditions. National issues have been consistently ignored by him, and every platform which he has suggested has confined its declaration to local and state issues. The County Democracy at its last convention declared in favor of the taxation of franchises and the reform of our state taxing system; local option in taxation and municipal home rule; a reformed primary law and the direct election of Senators by the people. All of these are suggestive of the new ideas which are making themselves felt throughout the country. They are alien to national issues and affect the people at home. And there are many who think that Cleveland will be pioneer in showing that American cities, manned by American genius and force, will be the best governed communities in the world.

THE FRONTIER GONE AT LAST

HOW OUR RACE PUSHED IT WESTWARD AROUND THE WORLD AND NOW MOVES EASTWARD AGAIN—THE BROADER CONCEPTION OF PATRIOTISM AS THE AGE OF CONQUEST ENDS

BY

FRANK NORRIS

SUDDENLY we have found that there is no longer any Frontier. Until the day when the first United States marine landed in China we had always imagined that out yonder somewhere in the West was the border land where civilization disintegrated and merged into the untamed. Our skirmish line was there, our posts that scouted and scrimmaged with the wilderness, a thousand miles in advance of the steady march of civilization.

And the Frontier has become so much an integral part of our conception of things that it will be long before we shall all understand that it is gone. We liked the Frontier; it was romance, the place of the poetry of the Great March, the firing line where there was action and fighting, and where men held each other's lives in the crook of the forefinger. Those who had gone out came back with tremendous tales, and those that stayed behind made up other and even more tremendous tales.

When we—we Anglo-Saxons—busked ourselves for the first stage of the march, we began from that little historic reach of ground in the midst of the Friesland swamps, and we set our faces Westward, feeling no doubt the push of the Slav behind us. Then the Frontier was Britain and the sober peacefulness of land where are the ordered, cultivated English farmyards of today was the Wild West for the Frisians of that century; and for the little children of the Frisian peat cottages, Hengist was the Apache Kid and Horsa Deadwood Dick—freebooters, law-defiers, slayers-of-men, epic heroes, blood brothers if you please to Boone and Bowie.

Then for centuries we halted and the van closed up with the firing line and we filled all England and all Europe with our clamor because for a while we seemed to have gone as far Westward as it was possible; and the checked energy of the race reacted upon itself, rebounded as it were, and back we went to the

Eastward again—crusading, girding at the Mohammedan, conquering his cities, breaking into his fortresses with mangonel, siege engine and catapult—just as the boy shut indoors finds his scope circumscribed and fills the whole place with the racket of his activity.

But always, if you will recall it, we had a curious feeling that we had not reached the ultimate West even yet, that there was still a Frontier. Always that strange sixth sense turned our heads toward the sunset; and all through the Middle Ages we were peeking and prying at the Western horizon, trying to reach it, to run it down, and the queer tales about Vineland and that storm-driven Viking's ship would not down.

And then at last a naked savage on the shores of a little island in what is now our West Indies, looking Eastward one morning, saw the caravels, and on that day the Frontier was rediscovered, and promptly a hundred thousand of the most hardy rushed to the skirmish-line and went at the wilderness as only the Anglo-Saxon can.

And then the skirmish-line decided that it would declare itself independent of the main army behind and form an advance column of its own, a separate army corps, and no sooner was this done then again the scouts went forward, went Westward, pushing the Frontier ahead of them, scrimmaging with the wilderness, blazing the way. At last they forced the Frontier over the Sierra Nevada down to the edge of the Pacific. And here it would have been supposed that the Great March would have halted again as it did before the Atlantic, that here at last the Frontier ended.

But on the first of May, eighteen hundred and ninety-eight, a gun was fired in the Bay of Manila, still further Westward, and in response the skirmish-line crossed the Pacific, still pushing the Frontier before it. Then came a cry for help from Legation Street in Peking and as the first boat bearing its contingent of American marines took ground on the Asian shore, the Frontier—at last after so many centuries, after so many marches, after so much fighting, so much spilled blood, so much spent treasure, dwindled down and vanished; for the Anglo-Saxon in his course of empire had circled the globe and had brought the new civilization to the old civilization, had reached the starting point of history, the place from which the migrations began. So soon as the marines landed there was no longer any West, and the equation of the horizon, the problem of the centuries for the Anglo-Saxon was solved.

So, lament it though we may, the Frontier is gone, an idiosyncrasy that has been with us for thousands of years, the one peculiar picturesqueness of our life is no more. We may keep alive for many years yet the idea of a Wild West, but the hired cowboys and paid rough riders of Mr William Cody are more like "the real thing" than can be found today in Arizona, New Mexico or Idaho. Only the imitation cowboys, the college-bred fellows who "go out on a ranch" carry the revolver or wear the concho. The Frontier has become conscious of itself, acts the part for the Eastern visitor; and this self-consciousness is a sign, surer than all others, of the decadence of a type, the passing of an epoch. The Apache Kid and Deadwood Dick have gone to join Hengist and Horsa and the heroes of the Magnusson Saga.

But observe. What happened in the Middle Ages when for awhile we could find no Western Frontier? The race impulse was irresistible. March we must, conquer we must, and checked in the Westward course of empire we turned Eastward and expended the resistless energy that by blood was ours in conquering the Old World behind us.

Today we are the same race, with the same impulse, the same power and, because there is no longer a Frontier to absorb our overplus of energy, because there is no longer a wilderness to conquer and because we still must march, still must conquer, we remember the old days when our ancestors before us found the outlet for their activity checked and, rebounding, turned their faces Eastward, and went down to invade the Old World. So we. No sooner have we found that our path to the Westward has ended than, reacting Eastward, we are at the Old World again, marching against it, invading it, devoting our overplus of energy to its subjugation.

But though we are the same race, with the same impulses, the same blood-instincts as the old Frisian marsh people, we are now come into a changed time and the great word of our century is no longer War but Trade.

Or if you choose it is only a different word for the same race-characteristic. The desire for conquest—say what you will—was as big in the breast of the most fervid of the Cru-

saders as it is this very day in the most peacefully-disposed of American manufacturers. Had the Lion-Hearted Richard lived today he would have become a "leading representative of the Amalgamated Steel Companies" and doubt not for one moment that he would have underbid his Manchester rivals in the matter of bridge girders. Had Mr. Andrew Carnegie been alive at the time of the preachings of Peter the Hermit he would have raised a company of *gens-d'armes* sooner than all of his brothers-in-arms, would have equipped his men better and more effectively, would have been first on the ground before Jerusalem, would have built the most ingenious siege engine and have hurled the first cask of Greek-fire over the walls.

Competition and conquest are words easily interchangeable, and the whole spirit of our present commercial crusade to the Eastward betrays itself in the fact that we cannot speak of it but in terms borrowed from the glossary of the warrior. It is a commercial "invasion," a trade "war," a "threatened attack" on the part of America; business is "captured," opportunities are "seized," certain industries are "killed," certain former monopolies are "wrested away." Seven hundred years ago a certain Count Baldwin, a great leader in the attack of the Anglo-Saxon Crusaders upon the Old World, built himself a siege engine which would help him enter the beleaguered city of Jerusalem. Jerusalem is beleaguered again today, and the hosts of the Anglo-Saxon commercial crusaders are knocking at the gates. And now a company named for another Baldwin—and for all we know a descendant of the count—leaders of the invaders of the Old World, advance upon the city, and, to help in the assault, build an engine—only now the engine is no longer called a *mangonel*, but a locomotive.

The difference is hardly of kind and scarcely of degree. It is a mere matter of names, and the ghost of Saladin watching the present engagement might easily fancy the old days back again.

So perhaps we have not lost the Frontier after all. A new phrase, reversing that of Berkeley's, is appropriate to the effect that "Eastward the course of commerce takes its way," and we must look for the lost battle-line not toward the sunset, but toward the East. And so rapid has been the retrograde movement that we must go far to find it, that scattered firing-line, where the little skirmishes are heralding the approach of the Great March. We must already go further afield than England. The main body, even to the reserves, are intrenched there long since, and even continental Europe is to the rear of the skirmishers.

Along about Suez we begin to catch up with them where they are deepening the great canal, and we can assure ourselves that we are fairly abreast of the most distant line of scouts only when we come to Khiva, to Samarcand, to Bokhara and the Trans-Baikal country.

Just now one hears much of the "American commercial invasion of England." But adjust the field glasses and look beyond Britain and search for the blaze that the scouts have left on the telegraph poles and mile posts of Hungary, Turkey, Turkey in Asia, Persia, Beloochistan, India and Siam. You'll find the blaze distinct and the road, though rough hewn, is easy to follow. Prophecy and presumption be far from us, but it would be against all precedent that the Grand March should rest forever upon its arms and its laurels along the Thames, the Mersey and the Clyde, while its pioneers and Frontiersmen are making roads for it to the Eastward.

Is it too huge a conception, too inordinate an idea to say that the American conquest of England is but an incident of the Greater Invasion, an affair of outposts preparatory to the real manœuvre that shall embrace Europe, Asia, the whole of the Old World? Why not? And the blaze is ahead of us, and every now and then from far off there in the countries that are under the rising sun we catch the faint sounds of the skirmishing of our outposts. One of two things invariably happens under such circumstances as these: either the outposts fall back upon the main body or the main body moves up to the support of its outposts. One does not think that the outposts will fall back.

And so goes the great movement, Westward, then Eastward, forward and then back. The motion of the natural forces, the elemental energies, somehow appear to be thus alternative—action first, then reaction. The tides ebb and flow again, the seasons have

their slow vibrations, touching extremes at periodic intervals. Not impossibly, in the larger view, is the analogy applicable to the movements of the races. First Westward with the great migrations, now Eastward with the course of commerce, moving in a colossal arc measured only by the hemispheres, as though upon the equator a giant dial hand oscillated, in gradual divisions through the centuries, now marking off the Westward progress, now traveling proportionately to the reaction toward the East.

Races must follow their destiny blindly, but is it not possible that we can find in this great destiny of ours something a little better than mere battle and conquest, something a little more generous than mere trading and underbidding? Inevitably with constant change of environment comes the larger view, the more tolerant spirit, and every race movement, from the first step beyond the Friesland swamp to the adjustment of the first American theodolite on the Himalayan watershed, is an unconscious lesson in patriotism. Just now we cannot get beyond the self-laudatory mood, but is it not possible to hope that, as the progress develops, a new patriotism, one that shall include all peoples, may prevail? The past would indicate that this is a goal toward which we trend.

In the end let us take the larger view, ignoring the Frieslanders, the Anglo-Saxons, the Americans. Let us look at the peoples as a people and observe how inevitably as they answer the great Westward impulse the true patriotism develops. If we can see that it is so with all of them we can assume that it must be so with us, and may know that mere victory in battle as we march Westward, or mere supremacy in trade as we react to the East is not after all the great achievement of the races but patriotism. Not our selfish present-day conception of the word, but a new patriotism, whose meaning is now the secret of the coming centuries.

Consider then the beginnings of patriotism. At the very first, the seed of the future nation was the regard of family; the ties of common birth held men together and the first feeling of patriotism was the love of family. But the family grows, develops by lateral branches, expands and becomes the clan. Patriotism is the devotion to the clan, and the clansmen will fight and die for its supremacy.

Then comes the time when the clans, tired of the roving life of herders, halt a moment and settle down in a chosen spot, the tent becoming permanent evolves the dwelling house, and the encampment of the clan becomes at last a city. Patriotism now is civic pride, the clan absorbed into a multitude of clans is forgotten; men speak of themselves as Athenians not as Greeks, as Romans not as Italians. It is the age of cities.

The city extends its adjoining grazing fields, they include outlying towns, other cities, and finally the State comes into being. Patriotism no longer confines itself to the walls of the city, but is enlarged to encompass the entire province. Men are Hanoverians or Wurtemburgers not Germans; Scots or Welsh not English; are even Carolinians or Alabamans rather than Americans.

But the States are federated, pronounced boundaries fade, State makes common cause with State and at last the nation is born. Patriotism at once is a national affair, a far larger, broader, truer sentiment than that first huddling about the hearthstone of the family. The word "brother" may be applied to men unseen and unknown, and a countryman is one of many millions.

We have reached this stage at the present, but if all signs are true, if all precedent may be followed, if all augury may be relied on and the tree grow as we see the twig is bent, the progress will not stop here.

By war to the Westward the family fought its way upward to the dignity of the nation, by reaction Eastward the nation may in patriotic effect merge with other nations, and others and still others, peacefully, the bitterness of trade competition may be lost, the business of the nations seen as a friendly *quid pro quo*, give and take arrangement, guided by a generous reciprocity. Every century the boundaries are widening, patriotism widens with the expansion, and our countrymen are those of different race, even different nations.

Will it not go on, this epic of civilization, this destiny of the races, until at last and at the ultimate end of all, we who now arrogantly boast ourselves as Americans, supreme in conquest, whether of battle-ship or of bridge-building, may realize that the true patriotism is the brotherhood of man and know that the whole world is our nation and simple humanity our countrymen?

AGRICULTURE UNDER CLOTH

THE WONDERFUL IMPROVEMENT IN GROWING TOBACCO IN CONNECTICUT UNDER CONDITIONS THAT PROTECT AND SHELTER THE LEAVES—PROMISE OF A NEW ERA IN LEAF-CULTURE

BY

ARTHUR GOODRICH

THE farmers of the Connecticut and Farmington River valleys shook their heads half in wonder and half in ridicule when it was reported, less than a year ago, that the Mitchelsons "up at Tariffville" were going to raise tobacco under tents. There was only one way to grow tobacco, and that was the way they had always grown it, and their fathers and grandfathers before them, producing the same thick, coarse leaves that have wrapped countless millions of domestic cigars. The planting machine, it was true, had demonstrated its ability to set tobacco plants more uniformly and with less possibility of harm to the roots than the old method of planting by hand; and parallel rows of machine and hand-set plants had shown that the former grew more rapidly. Many growers, however, still held to their attitude of self-satisfied scoffing about the planting machine. But the idea of spending hundreds of dollars in covering acres of ground, in which the tobacco had not yet been planted, with cheese-cloth, which the first strong wind would tear away, literally scattering the innovation to the four winds of Heaven, was little short of preposterous. The Mitchelsons offered one man forty cents a pound for his product on the field if he would try a few acres of shade-grown tobacco. Indeed they were so anxious to give the idea a thorough trial that they promised to furnish the covering for his fields. He was very much of a doubter, however, and hesitated for some time before he accepted, although his crop ordinarily yielded him only twelve to fifteen cents. Many of the largest growers joined in the general disbelief.

It was on a trip in the South that Joseph Mitchelson saw the experiments which were being made on limited areas in Florida of growing Sumatra tobacco under both cloth and lath shade. The results had been satisfactory. The Government was interested, and M. L. Floyd, an expert in the Bureau of Soils, was directing the experiments. The Paris Exposition had awarded to this Florida-grown Sumatra tobacco two points over that grown in Sumatra and imported. The soil and climate of Connecticut were made expressly for tobacco raising. There was no reason why Connecticut tobacco raised under cover should not be as fine as the best Sumatra and finer. Ariel Mitchelson, who was a progressive farmer at Tariffville, was the man to try it. As a result, early last spring they began to place posts nine feet high above ground and a rod apart on four different tracts of land, amounting in the aggregate to eighteen acres. Over these posts on stringers and galvanized wire they stretched the cheese-cloth covering, closing in the field above and on every side. When the entire cumbersome structure with its 196 posts to an acre, its stringers, wire, cloth, snap-hooks and rings was erected it cost about $250 an acre. The long rows of plants—all of Sumatra seed which had had one year's growth in Florida—were set at different times on the several fields that the harvesting of each might follow in quick succession. Mr. Floyd had come to Connecticut to direct the work of the little plantation.

As the plants grew, the advantages of raising under shade became easily evident. Most patent of all was the fact that the many insects which prey upon the leaves were kept out by the covering. So strongly was the tight tent of cloth built, moreover, that the roughest winds necessitated but few repairs, and the plants, usually lashed and torn by the storms, were entirely protected. Under the cloth, also, a uniform temperature was possible,

TACKING ON THE CHEESECLOTH COVER

varying from three to five degrees warmer than that of the open field. The cold nights of the spring which deter the growth of the plants in the open did not influence the growing under cover. Within the tents a continuous tropical climate existed. The hot sun that bakes the soil was tempered, and a considerably larger percentage of humidity was kept under the cloth than was possible in the fields. The effects of heavy rains were also modified. The leaves were not harmed by the swift drops, nor did the soil become packed and hardened into a crust. Instead, the water, beating upon the cloth, sifted through and fell in a fine, warm mist upon the plants. The growth seemed to have the advantages of both the open air and the hot-house, gaining the health of one and the protected fineness of the other. With the idea of getting the finest possible leaf the plants were not topped. In the early summer, the long stalks, standing up like rows of sturdy poles, and bearing thin, broad leaves of a vivid green, were touching the roof of their house of cloth.

And the fame of tented tobacco fields and plants nine feet high went out among the growers. Many of them came to see the fabulous growth, doubting the reports they had heard, having no faith in building cheesecloth houses for tobacco, prepared to ridicule the whole project. But when they had walked down between rows upon rows of veritable trees of tobacco, which shook out great green leaves three or four feet above their heads, and when they had examined these luxuriant, symmetrical, shining leaves, twenty to twenty-four inches in length, and noted the thin fineness of them, their perfect size and shape for wrappers,—giving two full cuts without waste,—and their remarkable strength and stretch, many of the visitors began to examine the structure, to inquire into costs and to make plans for their own fields of tobacco. The Secretary of Agriculture, Mr. Wilson, came up from Washington and went over the ground, congratulating the growers and making suggestions. And it gradually dawned upon the farmers of the

ONE OF THE COVERED FIELDS

FOUR FEET HIGH

section that the lights of the Tariffville hills at night were not will-o'-the-wisps after all, but substantial beacon lights of progress.

As the work went on the utmost care was taken with every detail, and many experiments were tried. The seed was taken only from blossoms that had grown on the main stalk. When the time for picking came, instead of cutting down the entire plant, the leaves were laboriously picked one by one and piled upon the ground. Placed back to back, and thirty-five in a string, they were threaded with a long steel needle and stretched upon a lath and hung up indoors. For sixteen days they were allowed to dry. Then they were taken upstairs to the sweating-room, where, under blankets for six weeks and with many turnings, the uneven colors were shaded to a rich cinnamon tint. This done they were sized, sorted and packed in big bales ready for shipment. In the barns, as under the cloth, every precaution was taken for absolute cleanliness. So thin were the leaves that it took between two and three hundred of them to weigh a pound, while fifty or sixty of the outside grown leaves have the same weight. But the fine leaves are elastic and strong. The stalks meanwhile had been chopped up to be used for fertilizer.

The first trial field under shade of one-third of an acre yielded 700 pounds and the crop sold for $473.70. Outside grown tobacco

THE EARLY GROWTH

THROUGH THE ROWS AFTER THE PLANTING

seldom brings more than twenty-five cents a pound. From the Tariffville fields they picked from 1,600 to 2,000 pounds to an acre last year and the money value of the crop is to be decided by an open auction. The careful judgment of unprejudiced tobacco men, obtained by tests, is that this first attempt has produced tobacco which is equal to the

THROUGH THE ROWS IN JULY

best Sumatra grown leaf for wrappers. Certainly raising tobacco under shade has grown from a doubtful experiment to a commercial fact. Instead of four small fields aggregating eighteen acres there are a number of companies formed and forming which will eventually cover hundreds of acres of Connecticut and Massachusetts ground with cheesecloth. Every available bit of land is being examined, and many tracts are being either leased or bought. And, with the duty larger farms of 1902 should improve the trial plantations of 1901. Much of the preparation last year had to be made in great haste and many improvements will be made both in putting up the cover and in details of the tobacco raising.

Nor is tobacco the only plant which the shelter, uniform temperature and greater humidity of careful covering will aid. All kinds of leaf growth should be made finer if grown under shade for the same reasons that

PICKING THE LEAVES

to aid them, there is little reason why the Connecticut growers, with their armies of tobacco plants under tents, cannot compete successfully with the tobacco raisers of Sumatra. The people of the United States have been sending from $5,000,000 to $6,000,000 yearly to Sumatra for wrapper tobacco. It seems likely that the Connecticut farms, with their fine soil and artificial tropical climate, will keep a portion of this amount at home. There are many ways by which the have made the tobacco experiment a success. And this success has been due not only to the idea, but to the men who have conducted the work on the trial plantations. In crop raising, as in every other line of endeavor, progressive plans demand well-informed, energetic men, and the new agriculture under cloth should not only grow better tobacco, but should furnish as well an impulse for more progressive farming on the New England hills.

PLAIN WORDS ON TEACHERS' WAGES

THE CONTRACTION OF OUR PROFESSED REGARD FOR TEACHERS AND OUR TREATMENT OF THEM — HOW TEACHERS' SALARIES IN NEW YORK WERE RAISED — THE TEACHER TO THE TAX-PAYER

BY

WILLIAM McANDREW

THE words of a wealthy man, a large giver to educational work, are thus reported in a newspaper account of one of his recent speeches: "For the teacher cannot be a slave. She must think and act for herself. On her depends the training of the children of a free people. She rocks the cradle of the State. What profession is so noble and so sacred? All honor to the teacher!"

On the same evening he entertained at dinner the designer of his yacht, while the teacher of his children dined with them, as always, in the servants' ordinary. Besides being the sole employer of one teacher for his own little ones he is trustee of a great school and has the deciding voice on the salary of the women who do the chief work in it. On his pay-roll are teachers at $450 a year, in a city where hall bedrooms and board at seven dollars a week is not considered high, though it is luxurious for a woman who would thus have a balance of ninety-five dollars for a year's expenditure for clothing, books, car-fare, amusements and everything else.

This gentleman in an interview on salaries says: "We want the best teachers, but we don't propose to pay two dollars where one will do." He is not a monster of cruelty or selfishness. He is a genial, gracious citizen, generous in various directions. He makes up deficits out of his own pocket. He blows no trumpet over his alms. He has the same ideas about schools and teaching as nine-tenths of the readers of this page. He, in common with almost every citizen, lacks the habit of exercising his imagination in the direction of putting himself in the teacher's place. That is the trouble with you yourself. You clap your hands together when speakers glorify the great American public school, but you grasp your pocket when the school tax is beginning to look large. You will not investigate the personal needs of those whom you expect to bring your children to broad views and generous ideals. Here is what you say through the mouths of prominent speakers in political campaigns:

"The school teacher controls what the rest of us do not control—the future of manhood and womanhood which must make up the rich fruitage of our whole civilization."—*Edward M. Shepard.*

"The work of the teacher branches out like the pines of the Carolinas; it reaches the family, exalts the home, pervades society with its ennobling influences, strengthening the foundations of the State, and adds to the glory and magnificence of the nation."—*Charles E. Robertson.*

Here is what you do:

I. "Nearly all classes, old and young, look down on school teachers as upon unfortunates who have adopted teaching because there is no other way of livelihood open to them."—*John Gilmer Speed.*

II. "The community does not tempt the highest type of mind toward this calling because of the inadequacy of rewards and the uncertainty of advancement in the teaching profession."—*Richard Watson Gilder.*

III. "We commit our educational machinery to the unfit and inexperienced. We need able men and women of mature ability, but we do not pay the price that attracts such service."—*John Davidson.*

IV. "We have been careful as the nation waxed in material prosperity to keep the pay of teachers down and to shove them into the social background more and more. How can men of the highest class be expected to devote their lives to a profession which yields little more than a pittance when one is thoroughly successful? The State is satisfied to pay the average instructor about as much as the city laborer or a horse-car conductor receives."—*Robert Grant.*

V. From the average monthly salaries of men and women teachers given in the last report of

the United States Commissioner of Education, and from the average length of the school year, the average yearly salary of male teachers is estimated to be about $328.80 and of women teachers $274.60.

Such are the separate testimonies of an essayist, an editor, a professor of economics, a judge, and a statistician. And yet some magazine writers express wonder that education is the movement which philanthropists have of late selected as the beneficiary of their gifts. Bequests in sums of $5,000 and upwards in 1900 amounted to $23,000,000 for purely educational institutions, with an added $3,000,000 for libraries. In 1901 similar gifts aggregated more than $50,000,000.

Meantime an average of several strong writers per month wonder why education is not better than it is. I know a man who owns the finest launch on Hempstead harbor. It is finished in mahogany, has silver-plated metal work, and every fitting in the most luxurious style. Its early trials were failures until the expert found that the feed-pipe from the fuel tank was so small that the engine had nothing to eat or drink, whichever it may be. The givers to educational institutions put up splendid buildings and equip them with expensive apparatus, but the expenditure of more money on any particular or general group of men and women, the teaching force, which is the real essence of every school, is a proposition that does not yet appeal to the man of means. I cannot understand this reluctance. The proposition seems so reasonable. Here is the school. Its whole aim is service to the community, through an output of high-class graduates. The teachers must render this service. Books, building, all material things are only tools. The real school is the teacher. The generosity, the ample provision for life made right there in the condition of the teacher would seem to promise the surest and quickest return, but this is a subject which trustees dislike to discuss and donors regard as an impertinence. Whether it is because apparatus stays in one spot and makes a show; whether it is because buildings are large and imposing and may have one's name carved on them; whether it is because of the historic contempt in which schoolmasters have been held so long, as echoed in literature from Horace to Dickens, who can tell? Were I a millionaire philanthropist I should dread that any splendid pile of mine should by its magnificence shame the penury of the leading workers in it or be associated with constant discontent, unnecessary sacrifice, and dreary economic slavery. It seems to me I could desire no greater glory than to be the founder of a school wherein the teachers were held in the highest honor and regarded by me, at least once a month, as of more value than stone and glass and iron.

For when you come to study the theorists you find them all agreeing that personality is the main feature of instruction, and when you come into practical contact with a school you find that it is the personal teacher of your children that concerns you. And so you must conclude that the teacher is essentially education.

The American people, when it speaks through the orator and the essayist, says it wants from the schools, intelligent, patriotic, healthy, and happy citizens. There is no building or apparatus or curriculum or system that can turn out such a product unless in connection with it there are intelligent, patriotic, healthy, and happy teachers. It seems unnecessary to suggest that you must give teachers the means of supplying themselves with these fine qualities. They cannot obtain these means except from you. Teachers cannot, in appreciable numbers, establish schools of their own and by tuition income get more money in order to live more happily, for you, the American public, have a monopoly of the education business. You are practically the only employer. You can and do pay what you please. Your present discontent with education, awakened by the rise of anarchism, is largely due to your own treatment of your teachers. It does not matter how enthusiastic and hopeful are the teachers you may get every year fresh from the training schools. Unless you treat them well they are bound to deteriorate. You know how true this is of a horse, or a flower, or even of an automobile; but you seem to think teachers can live by a law different from that of other organisms. Pause and think that the pauperizing of teachers in any community is a constant menace, not only to the community that commits the sin but to every community to which the pupils of such teachers go. What you think you save from teachers you lose not only in their service, but on hospitals, courts and jails.

Who is going to look after this matter of teachers wages? A gentleman of large wealth whom I heard discuss the salary question recently, deplored the introduction of commercialism into education. He said, quite truly too, that education was so much a matter of love that its laborers must be inspired with the missionary spirit and not degrade their noble calling by the unworthier pursuit of gain. That same man hires teachers by asking them, "What do you think you are worth?" and beats them down to a low figure, using this commercial method to lead the teachers to a nearer approach to the uncommercial missionary spirit. This gentleman is further quoted as saying, "I think you are wrong ever to expect a teacher to enjoy to any great degree the luxuries or even all the conveniences of life, or above all to expect the trustees of an institution to stand between a man and the consequences of a too liberal expenditure of the money. If teachers would stop whining about their pay there would be more dignity to their calling."

There is a good deal of this feeling about wages among the educational leaders, too. Superintendents and those associated with the hiring of teachers seem to acquire this elevated thought. The National Educational Association does not take up an investigation of wages. The leaders have one and another reason against it and go on devising programmes and presenting papers on the management of teachers and the ideals of education. But the educational field is thus cultivated enough, Heaven knows. This drilling, weeding, and holding before the plants pictures of the fruit they ought to bear might better give way to a movement for fertilizing the soil. What is the use of lecturing to death a man who gets $328.80 per year, or a woman existing on $274.60? There is not so much need of polishing the brass-work as of putting more fuel in the tank.

The task of bringing the wages of teachers to a good living basis is bound to fall chiefly on those teachers who mean to stay in the ranks and teach. After a sufficiently long period of trying to make bricks without straw, enough of them will succeed in getting together to learn how to state their case effectively.

I love that scene in the life of the old Scotchman, Murdock, who, after furnishing for years the brains and skill that made the fortune of that firm of first engine-makers, Boulton & Watt, one day spoke out like a man and ended the long series of snubs, oppression and contempt which had been his portion. Would that, for one brief moment, the whole public could be fused into one personality that the teacher might frankly and honestly speak to him her mind. We should hear something in this fashion:—

"O, taxpayer, you dear bugaboo, you bogie with which politicians try to frighten themselves. Let us talk sense for two minutes. I am a school teacher. You entrust to me your dearest belongings and you ask that I shall make them noble men and women no matter what ignoble traits you and your ancestors have put into them. I serve as mother to your boys, fifty and sixty at a time. I have heard your wife declare that one nearly drives her crazy, but I have the fifty all at once and long hours at a stretch. Day after day, year after year, I take these fifties and successive fifties and try to hold before them, unworthy as I may be, the praise and glory of a manly life, a clean and honest and generous life. I have washed their dirty little hands, bound up their cuts and scratches, sympathized with their childish griefs, loved the little rascals on days when I felt well and tried not to hate them on days when they made me ill.

"Twelve years of daily work with little children has not made me great, taxpayer. I know that too well. I realize that my mind is dwarfed and petty, and the humorists in the papers, men whom I taught the rudiments of their skilful English, may easily hold up to ridicule me and my calling. You, taxpayer, with your society, your club, your outdoor sports, your business with men of large affairs, can not know what it is to feel yourself stagnating in mind, and losing attractiveness of face and person in a work like this. I am a woman, taxpayer, and I cannot with complete complacency, regard the change in me that comes from twelve years' work teaching boys.

"The wear and strain has been unnecessary. If I could have hired two rooms to live in, with a little window full of flowers like that one at the south of your home; if I could have driven through the park occasionally in a rented carriage like the one your lady owns; if I could have hired a dressmaker, who knew how really to fit a person, (for I can do better

work in better clothes) I would not bear my twelve years as if they had been twenty-four. An intelligent man like you is aware that teaching must rest on happy and good-natured management. You should know that my temper is the main consideration. You cannot treat me shabbily without degrading the quality of the service I can render to your boy. You cannot snub me without making your own son a snob. You cannot count me as one of your charities without reducing your own children to be charity wards.

"Do you want them to have the best? You must then make me the best. It is no Chinese puzzle. There is no calculation in your business more simple than this. Estimate what it would cost your own wife to live happily and well if you were gone. Why should you wish me, with my harder work, to live on less? It will be a good investment. Taxpayer, I render you high service and you put enough supervisors in charge of me to keep me from going to sleep. If I should stop my work, this country, in one generation, would relapse into barbarity. Every babe begins his life a savage. You expect me to perform the greatest work in civilizing him. Who taught you, yourself to read, to write, to figure, and to think and to earn your chance to pay taxes, taxpayer? Do not be afraid of wasting your money upon me? Who am I? I am your daughter, your sister, your neighbor's girl. Each dollar that you pay me builds up the better interests of your town. People move here and pay rent when I work well, for they want their children to come to me. I engage my living-room in your house; I pay my bills to you. You sell me groceries, clothes and books. Come now, we have had enough of fault finding. If you want me to do better, help me, do not hinder."

The work of raising wages to the point where the best work is possible must be done by the teacher for the same historic reason that the incomes of lawyers, doctors and other professional men have been increased by none other than lawyers, doctors and other professional men. The teacher knows more about the requirements of teaching than any one else does. The teacher is more truly the guardian of education than any one else. It is most intimately the duty of the teacher to see that education does not fail from lack of such aids as are necessary for its best perfection. Means of living are certainly among such.

The first requisite is for teachers to unite and to study actual conditions. Let the teachers' associations get at the facts. Let them show the absurdity of the present common procedure in hiring teachers; the impertinence of the theory of supply and demand as applied to determining teachers' salaries; the weakness of the plea that teachers' pay should be short because vacations are long; the cruelty of the satire that says teachers make up in respect what they fail to receive in money; the failure of the missionary doctrine and, in short, the impossibility of the best schooling until the teachers are maintained in the condition for doing the best work.

To my mind the strongest practical service in this line comes in the effort to get those who fix the salaries to estimate in detail how these could be spent to the best advantage. This results in such evident absurdities (like Dido's covering the site of Carthage with a bull's hide) that there is only one conclusion: the teacher must be better paid. More valuable yet is an estimate of the cost of a fairly good living in the community in which the teacher lives. Those selected by the New York Teachers' Association are as follows:

BASIS OF ESTIMATES FOR YEARLY COST OF A GOOD LIVING

FOR MAN OF 30 TO 50 YEARS AND FAMILY	FOR SINGLE WOMAN
Rent	Rooms
Light and fuel	Board
Table, ice, etc.	Service
Repairs and additions to equipment	Clothing
Service	Newspapers and periodical literature
Clothing and care of same, man	Books
Clothing and care of same, wife	Church and charity, etc.
Clothing and care of same, children	Amusements, concerts, etc.
Newspaper and periodical literature	Car fare and travel (not recreative)
Books	Extra expense of summer outing
Church and charity	Health — Doctor, dentist, medicine
Public spirit	Insurance premiums; life and fire
Amusements, concerts, etc.	Professional literature, societies, conventions, etc.
Car fare and travel (not recreative)	Other items (specify)
Extra expense of summer outing	Sinking fund
Health — Doctor, dentist, medicine	
Insurance premiums; life and fire	
If the man be a teacher, physician, or in any other profession, add for special periodicals, societies, conventions and mutual benefit funds	
Hospitality	
Other items—specify	
Sinking fund that ought to be laid aside each year for emergencies	
Total yearly estimate for a good living	

Let the association get reputable men and women to fill out such estimates; publish them with the name of each estimator, make an average and submit the figures to boards of education, and request correction of the estimate by such as deem them too high. Ask for a living wage, insured by schedules beyond reach of the precarious chances of each year's changing financial demands of the various departments of city government. Get more protection by State statutes. Intrench your position by every honest means that experience will teach you.

A definite example is more striking than general advice. It may be found in a study of the movement that resulted in giving to the teachers of New York City the highest wages paid in any school system in the world. Five or six years ago a few men and women, public school teachers in the metropolis, began speaking and writing on "the living wage" for educational workers; they copied from the city records the wages of various officials, messengers, stablemen and street sweepers and compared them with those of teachers. They printed the comparisons in the newspapers, distributed them as pamphlets, saw different members of the boards of education, had hearings before committees of the boards, and finally secured the passage of schedules of salaries that were great improvements upon previous ones. These schedules, however, proved to be more academic than practical, as the Board of Estimate declined to apportion sufficient money to pay them. This is the point to which several reforms of teachers' wages have recently gone in various cities, only to stop and die. In New York they were carried past this stage by various hard-working persons, and largely through the help of Senator John F. Ahearn, whose bill, after several delays and one veto, became a State law, requiring the financial authorities of the city to pay such schedules as the school boards might make and requiring the school boards to keep above certain sums in the yearly wage of certain teachers. This law was unique among educational measures. As a usual thing the Legislature says the teacher shall not receive more than so much per annum, but this law said she shall not receive less than six hundred a year. It went into operation in 1899, and met with early opposition from the financial officers of the city. They refused to apportion sufficient money to pay the new schedules. In some cases the boards stood by the schedules; the teachers brought suit and won the money. In other cases the boards withdrew the schedules and no action could be taken. The treatment of the educational employees by the officials of the city treasury resulted in such distress that over a dozen bills for relief were introduced into the State Legislature by as many members. The thing most needed was an insurance of sufficient funds to pay the teachers' wages. Wm. H. Maxwell, the present City Superintendent of Schools, who previously held a corresponding position in Brooklyn, had for many years been an agitator for higher wages for teachers. He was among those who early proposed that a certain per cent. of the money raised by taxation be reserved by law for teachers' wages. Thus, whatever emergency might arise, or seem to arise, the constant necessity of educating the children would not suffer. This feature was embodied in a bill at Albany. The movement for better pay enlisted the active support of Senators Ford, Ellsberg, Slater, Stranahan and Marshall. Debates, discussions and hearings occurred in great numbers. The result was a new bill which reaffirmed with additions the Ahearn schedules, and added the saving provision that each year four mills on every dollar of assessable property should be set aside for the fund from which teachers should be paid. This Davis bill was fought with much bitterness by many officials of New York City and by some leading members of the school boards of Brooklyn and Manhattan. The city superintendent of schools took the floor at Albany for it. President Nicholas Murray Butler, of Columbia, requested by Governor Roosevelt to advise him on the bill, took luncheon with him, and the bill was signed over the Mayor's veto and became a law. From the beginning of the appeals to the various school boards, through all the discussions over various schedules and the debates in the Legislature, the plea for the "living wage" was always prominent. New York has now provided by law that no regular teacher of the greater city must be expected to live on less than $600 a year, and as experience and merit become evident increases of pay are made, so that a grammar school female teacher may reach a salary of

$1,500 and a male teacher $2,400 per annum. High school salaries run from $700 to $2,500 for women and from $900 to $3,000 for men. Principals of elementary schools, if women, receive from $1,400 to $2,500 per annum; if men, from $2,100 to $3,500. High school principals receive from $3,500 to $5,000 a year. These figures compared with teachers' wages elsewhere seem liberal, yet they average the lowest of those paid for brain-work in any department of the city government. Before the Ahearn law New York teachers' wages were less than those of street cleaners and elevator boys.

I expect to see the day when a man with millions to give for the education of the children of his fellow-men will endow his gift upon the flesh and blood and spirit of teachers rather than on blocks of wood and stone; for there are preachers who minister five hours a day five days a week unto such as may make the kingdom of Heaven upon earth; for there are physicians who attend the birth of all those nobler qualities, mind and heart, that make noble men and gentle women. These are they whom you call teachers.

A GAUCHO'S DAY'S WORK

BY

WILLIAM BULFIN

AUTHOR OF "TALES OF THE PAMPAS," ETC.

THE night is waning as the gaucho turns over on his open-air bed of saddle cloths and saddle cover and opens his eyes. The stars are strangely big and bright and they glow rather than twinkle, standing out from the background of space like diamonds. There is nothing to be compared, in its own peculiar way, with the thrill that goes through you when you wake out of a sound sleep under such a canopy. The gaucho is used to it, but he likes it so well that during the spring and summer months he prefers the unveiled stars to any other roof.

Only half awake, he raises himself lazily on his elbow. A few yards away, on the sheltered side of a rick of alfalfa, another sleeper awakes.

The morning fire of brambles or dry thistle stalks or bones or maize cobs is blazing quickly. The kettle is singing, and seated round it the gauchos drink their favorite beverage—Paraguay tea—sucking it slowly from gourds through brass or silver tubes.

As the firelight shows them in the darkness of the hour that precedes the dawn, they are swarthy of complexion, dark-eyed, slight of figure, clean of build. They remind you of Gipsies, also of Moors, and in their veins flows the blood of the Indians who once owned the pampa and lost it to the Spaniards. There is Spanish blood in them, too. The flourish with which he touches his hat, the grace with which he waves you to a stool made of a cow skull, the grave hospitality with which he hands you the teacup, the politeness with which he receives your remarks about the weather—everything about him when he is at his best has a Spanish suggestiveness. But still the gaucho is not a Spaniard. The pampa looks out of his eyes, is in his voice, his dress, his manner. The wilderness speaks to all who love it and teaches them things which make them different from other men.

There is to be a round-up to-day. There are over four thousand head of cattle on this division of the estate or camp, as we call the ranch in pampa parlance. Orders have been given to pick out five hundred of the best steers, which are to be driven to the lands closer to Buenos Ayres.

First look to your riding gear and take a leaf from the gaucho's book. In all his outfit there is scarcely an inch of leather. His girth or cinch is a strip of cowhide from nine inches to over a foot in width, and the top-piece to which it is fastened by rawhide thongs is of the same material. On the off side, where the top-piece meets the girth, the rawhide lasso is buttoned and coiled. You who have not been trained to the use of the lasso had

better leave it behind you, for you are far more likely to catch yourself than a cow or calf. Fasten those sheepskin saddle covers well over the top-pieces. See that those enormous Spanish bits are properly adjusted if you do not wish to reduce your horse's mouth to a mere mass of bloody pulp. Be careful in mounting and be quick about it. Look out for the swing round as you put foot in stirrup and hand on rein. If you are wearing spurs be careful lest in crossing over the rowels should come in contact with the haunches which are quivering with excitement. Ride from your knees like horsemen; use knee and stirrup to lighten the jolt on the hips as every stride of the gallop is ended; lean forward and keep the balance well; in effect, give those pampa-bred horses fair play and they will gallop until your shoulders ache, until the sweat and bridle foam are clotted on your boot tops, until your stirrups are clogged with the seeds of grasses and thistles snipped off as you swing merrily through them and until, for your own sake at least, it is time to unsaddle and rest.

It is an ideal pampa morning. The wide, treeless plain, unbroken by hill or undulation from horizon to horizon, lies before you and around you. As we gallop knee to knee, holding the spirited horses on a tight rein, the rich dew-laden verdure swishes and hisses against our insteps and stirrups.

"*Ya-ha-hai!*" shout the men as the cattle scurry before them toward the ground where the round-up is to be held.

"*Vuelta-buey, vue-e-elta bue-ey!*" (turn, bullock) "*yah-hai-hoo-o!*"

How picturesque the men look outlined against the sky, bobbing up and down if they are riding slowly, but streaking the blue over the horizon if they are chasing some bunch of cows that have taken the wrong direction. There is a vibrating, rumbling something in the air now that cannot be thunder nor the distant voice of a windstorm. The cattle are gathering from all sides toward the round-up ground, some at a steady trot, some at a gallop. The horsemen who had disappeared now begin to dot the sky-line one by one, rolling the scattered herd before them. The thunder of hoofs grows louder; the shouts and whoops sing out. Your horse tugs at the rein, arches his neck and bounds under you in mad eagerness to be away. What is in your blood now? What makes it dance through you and drum in your ears? Why do you press your knees into your horse's sides and give him his head and tear like a madman from one bunch of cattle to another? You are simply under the spell of the pampa, akin to the wild, fresh beauty of the world, and thrilled with the joy of being alive.

The gauchos ride around the herd to settle it down. The cattle pant and blow after their gallop, a cloud of vapor rises from their heaving sides into the sunlight. We keep guard while our friends go in twos and threes to change horses. The remounts are massed about half a mile away around the fettered bell-mares, and near them is the smoke of a fire at which a man from the station is preparing to roast the juicy beef or mutton which will be the breakfast of the hungry riders.

Standing quietly at one side of the round-up ground, two hundred yards from the skirts of the herd, are about twenty steers all of one color. They are the trained decoys, and they are there to form the nucleus of the troop of five hundred steers which have yet to be parted. In charge of this troop of decoys is a man whose special function is to keep watch and ward over the discipline of his pupils. He is the man who has trained them in the trade of deception and taught them to lead their kindred into corrals, through gates of all kinds, and, as well, to set an example of passive obedience to five hundred unruly steers. He has had trouble this morning with one of his pupils, who, when in an insurrectionary mood, will break away from his comrades and try to run out of the country. He has to be followed, knocked down and obliged to return. Our friend the educationist does all this single handed. Going at full speed he catches Marcos by the tail and racing alongside him leans forward until his cheek touches his horse's mane, and then with one quick, powerful heave drags the rebel off his feet and dashes him to the ground.

Now the men pair off and each pair rides into the herd. They single out a steer for the troop which is forming and deftly edge him to the open camp. As soon as the animal gets clear of the herd he starts off at the top of his speed and the two horsemen are close to him, one on either side. They

head him toward the decoys around which the steers already parted out are massed. If he sees them he may race towards them of his own accord and he may not. If he tries to break away to the left the man on that side runs his horse against him. This move is a bold one and no rider who is not a born horseman should attempt it. The horse is an old hand and knows what is expected of him. The moment he gets a free head he jams his breast against the bullock's side, right behind the shoulder blade, and jostles him, leap by leap, in the required direction. Old and tricky steers who have been subjected to this treatment a few times will stop suddenly and thus freeing themselves from the jostling horse will try to break back to the herd, or go in any direction but that of the troop. As a last resource the lasso comes into play; but in most cases the runaway gives in.

That big four-year-old strawberry bolter yonder has headed for the far end of the camp, after baffling a pair of the less expert cattle men. Our friend the professor is a veteran specialist and he dashes in pursuit. He approaches his quarry at right angles, both of them going like the wind. With a shout he drives home the spurs and runs his horse full tilt against the side of the runaway, rolling him over with a thud which is sickening to hear. As the steer falls the horse rears and tramples him and then jumps over him. Before the prisoner knows what has happened to him he is hustled into the troop and left to think it over or have it all explained to him by some of his kindred who were eye-witnesses. If, as occasionally happens, the runaway cannot be convinced by being knocked down and ridden over and trampled upon, he is simply lassoed by the horns and towed back, bellowing, resisting but beaten and humiliated, to the troop. On arriving there a second lasso is dropped over his haunches, and the loop as it falls to the ground snares his hind legs. A third horseman runs his horse against him and knocks him over. The lasso is then removed from his horns, but the one on his hind legs is kept perfectly taut until the man who has removed the loop from the head has remounted. When the latter is safe on horseback again the hindmost lasso is slackened and, scrambling to his feet, the defeated rebel walks out of the loop and takes a prudent survey of the situation before again trying conclusions with his masters. This head-and-heel system of lassoing is also resorted to in marking and counter-marking cattle in the corral. In marking calves or horses the lassoing is different, for there one man is on horseback to lasso by the neck, while his comrade is on foot to snare the fore-feet by a peculiar twisting throw which can only be learned by one who begins in childhood.

It is breakfast time now. The sun is high and hot, and there is not a single cloud to lessen the glare and heat, nor is there a tree nearer than two miles. The riders come in batches of three or four and, standing around the spits, help themselves to the roast. There may be a few camp biscuits, hard as a rock, but many a time there is nothing but meat and salt, with only a drink of half-tepid water to wash it down. After a hasty meal the men smoke a cigarette or two and then catch and saddle fresh horses before returning to work. If you are not a gaucho or a seasoned camp man there will be very little enjoyment left for you by this time. The roast is perhaps only half cooked, and as you gallop wearily round the herd the hot breath of the cattle seems strong and even repugnant. But the others are used to it all. The sun and the dust and the galloping and their deeds of horsemanship form the routine of their lives. They have change of work too, and of enjoyment. They have seasons of marking calves and foals, of shearing, of maize picking and of sheer idleness; and they have their horse-racing, and card-playing, and cock-fighting, and dancing, and love-making—all in their own gusty untamed manner.

The work goes on at the round-up until late in the afternoon; when the majordomo's practised eye tells him that the number of animals ordered is or ought to be complete, the herd is disbanded and the troop, led by the decoys, is moved toward the station. Two men ride in front like officers heading a marching column. The other ten or twelve men are scattered around the troop. There is no chatter or laughter. Every man is on the alert, for a stampede is not by any means out of the question. Listen to that whistle, low, coaxing, soothing, peculiar—*wheep-tha-whoaith*. It is the call of the trooper to the cattle. You can hear it whistled on the pampa wherever men are trooping cattle—north, south, east and west, in the sweltering,

A FLOCK OF SHEEP READY FOR SHEARING

TILTING THE RING—THE *SORTIJA*
A Gauchos' holiday in a camp-town

blistering midday or in the darkness and stillness of the night, long and low, plaintive—*wheep-tha-whoaith*.

But our friend in charge of the decoys is evidently uneasy. He turns frequently in his saddle, frowns, and shakes his riding whip at a certain member of his class. It is Marcos, of course.

"Keep back, my sirs," the master cautions us, "keep back—halt there!—look out, look out—!"

The catastrophe has occurred. Marcos has had what is called in Spanish a "personal incident" with one of his comrades or with one of the wild, untutored steers. He has started a quarrel and has spread it—has in fact knocked all the order and peace of the neighborhood into fragments, and, to add to the enormity of his offense, he has broken from the column and is running madly away. The rest of the cattle follow him. At first they check and run hither and thither as the men gallop to the front and try to stop them. But it is only for a few moments that the stampede can be delayed. Off the entire troop dashes at last, and the riders in order to keep from being trampled down gallop madly ahead. One man rides after Marcos—it is

AT WORK INSIDE THE CORRAL

SUNDAY MORNING BREAKFAST
A mutton roast on the spit

our friend the trainer. He is mounted on a splendid horse and he is not long in overhauling his pupil. He races alongside him, closes in, nearer and nearer, until his horse's broad breast is planted behind the shoulder blade of the deserter and then, with his heavy riding whip gripped by the lash, he delivers a shower of blows upon the back and sides of the culprit. The rebellious decoy changes his course. This is precisely what his master wants. The plan of campaign is to force Marcos round in a vast circuit and draw the troop after him. Round and round the cattle are driven, narrowing the circuit every time until they are bunched together again, eddying in one confusing whirl of heaving backs and bristling horns. There are a few animals trampled down but they are not badly injured. They have been long enough on the ground to break the twisting whirl of which they were the victims, and once the eddy is broken it can be easily dealt with.

The corral into which the troop is to be shut for the night is near at hand, and the decoys are aware of the fact. With sedate and solemn deliberation they answer the call of their trainer and march toward the open gates. Marcos is amongst them. He whisks his

A GAUCHO IN FULL MARCHING ORDER

HEAD AND HEEL LASSOING AT THE ROUND-UP

tail nervously. The specialist rides slowly on one side of his pupils calling on them to be careful, to go quietly. The decoys pass through the open gates of the corral and go into their appointed corner. The other cattle follow them. All hands now turn to the professor who is riding at a slow walk towards the corral. Leaning against one of the posts is a cane about fourteen feet in length, with a sharp iron spike attached to the end of it and near the spike is a small bell which tinkles sharply and clearly at the slightest movement. The professor grasps this cane and rides into the corral. The other men follow him, all but two who dismount and stand, one on each side of the gate, to attend to the heavy cross-bars and fastenings when the moment for securing them arrives. The professor rides toward where his pupils are gathered together, shouting with all his force as he goes and shaking his lance on the shaft of which the bell tinkles merrily. On seeing their master approach

A GAUCHO'S RANCH

ENJOYING A HOLIDAY

they know well what is expected of them—namely, a dash to and through the gate with such suddenness and fury that the other cattle will not have time to follow them before the cross-bars are thrown into position and made fast.

"Outside!" shouts the professor, brandishing his lance. "Outside with you!"

There is a thunder of trampling hoofs and a rattling of horns, and an upheaval as if an earthquake had tossed the crowding cattle from side to side. Then with heads down, galloping at the top of their speed, the decoys tear through the ruck of their kindred and sweep through the gate. The professor is close behind them, his lance grasped in the middle, ready for use, and his eye on Marcos. The other riders spur into the middle of the corral and, wheeling so as to face the cattle, back their horses through the gate yelling as they go. When the last horse gets clear the heavy cross-bars are shut into their places with a bang and made fast. The troop is now safe until the morrow when, after the count has been made, it will begin its march, hungry but more anxious to graze than to stampede.

Out yonder on the plain, in that dust cloud raised by the flight of the decoys, the professor is having a stormy interview with Marcos. From the bellowings and vengeful yells which come down the wind one can imagine how the goad is working.

A STIRRUP CUP OF MATÉ

NOT SUCH A VILLAIN AS HE LOOKS

"There he goes" says the majordomo, half to himself half to the men around him, "there he goes, himself and his mad bullock. Dozens of times have I said that this Marcos should be slain. But no. He has been spared in order that his teacher should have the honour of subduing him. However, this will not go on any longer. That brute shall die tomorrow."

As a matter of fact he will not. The professor will plead for him as he has pleaded so often before and when the next day for parting comes Marcos may behave quite admirably.

The riding gears slap dully against the hard earth in front of the station gate as the reeking horses are unsaddled. Under the trees of the peach grove the fire is blazing bravely and around it and over it are spits and soup pots with their sputtering and bubbling store of good things for a well earned dinner. Away in the west the sun is waiting for a moment on the horizon before sinking in a blaze of glory. The shadows creep in from all sides. The gauchos' day's work is done.

GETTING READY TO SADDLE WILD HORSES

PICKING IN THE SAN FERNANDO ORCHARD

A GREAT AMERICAN OLIVE RANCH

THE LARGEST OLIVE GROVE IN THE WORLD — AN ORCHARD IN CALIFORNIA WHICH PRODUCES MORE FRUIT THAN ANY OLD-WORLD GROVE — HOW THE PRODUCTS ARE PREPARED FOR MARKET

BY

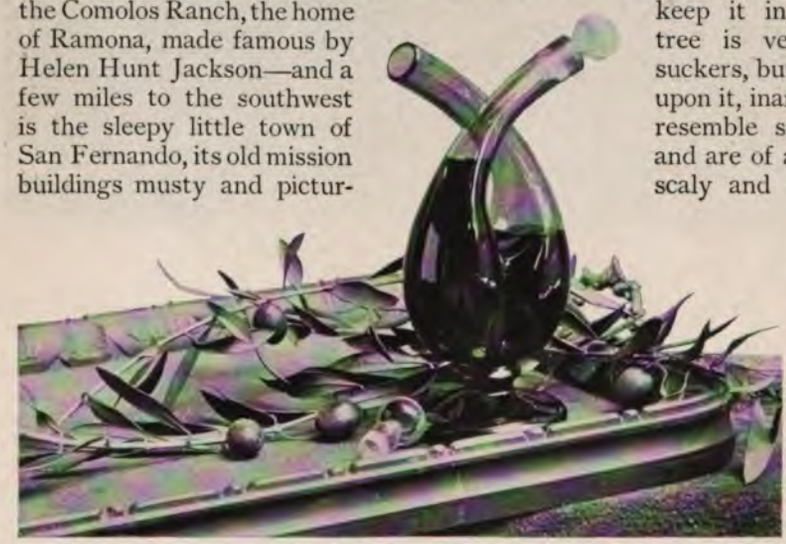
HELEN LUKENS JONES

IT has been said that a Yankee farmer can make anything grow anywhere. The remark, probably looked upon abroad as characteristic bombast, is only an example of American humor. But it is more than half true. Many sorts of growth that had seemingly become localized elsewhere have been successfully transplanted by the ingenuity of American growers. A case in point is that of American olives.

Olives seem so distinctively an old-world product, and the olive groves so essential a part of the life of the Southern European countries that American olives appear quite as impossible as American ruins or American laziness. Yet California, broad belt, that it is, of fruits and flowers is nurturing an olive industry which promises to rival both the other California productions and the olive groves along the Mediterranean. In fact the largest olive orchard in the world is in the San Fernando Valley, twenty-two miles north of Los Angeles. The olive tree is fastidious in regard to its environments and no part of America supplies its requirements except Middle and Southern California, and limited portions of Mexico and Arizona—the feasible area being so small that overproduction of the olive in America is practically impossible.

It was through the efforts of the Mission Fathers that the olive tree between 1769 and 1823 was planted in many of the coast settle-

ments of Southern California. The success of these trees gave proof that the soil and climatic conditions of this locality were especially adapted for successful olive growing and among the recent plantings of olives in California no trees have grown or borne more satisfactorily than those of the Los Angeles Olive Growers Association, an organization of men who own the San Fernando orchard. In this great olive forest the trees, resplendent in grey-green foliage, extend up to the very edges of the rugged Sierra Madre Mountains, while from every other side the luxuriant valley, with its billowy waves of green, spreads out to meet the hills that form its southern boundary. About twenty-five miles to the northwest is the Comolos Ranch, the home of Ramona, made famous by Helen Hunt Jackson—and a few miles to the southwest is the sleepy little town of San Fernando, its old mission buildings musty and picturesque with age and tradition. Seven years ago the Los Angeles Olive Growers Association was organized with a capital of $100,000. Two thousand acres of land were purchased, twelve hundred being planted for olives, one hundred trees to the acre. From fifty known varieties of olives grown in California the company selected the following, which, through actual test, had given the largest percentage of oil: Mission, Nevadillo Blanco and Manzanillo. The Mission is one of the oldest and best-known varieties. The fruit ripens in December and contains twenty-four per cent. of oil. The Nevadillo Blanco grows very vigorously and is a profuse bearer. The fruit is a little smaller than the Mission olive, ripening about November 1, and contains thirty-one per cent. of oil. The Manzanillo has fruit of moderate size which is highly prized for pickling. The trees grow rapidly and bear great clusters of fruit which ripens in October and contains thirty per cent. of oil of a very high grade. It is one of the advantages of the olive that it is ready for harvest at a time of year when other fruits do not require attention.



OLIVES AND THE OIL

Although the olive is considered a hardy tree, its roots are more sensitive to exposure or any sort of neglect than most others, and during its early life it requires careful, conscientious treatment. After the first three or four years, when the tree has become thoroughly established, very little effort is required to keep it in prosperous condition. The tree is very generally propagated by suckers, but when great care is bestowed upon it, inarching is practised. Its leaves resemble somewhat those of a willow, and are of a dull dark green color above, scaly and whitish-grey beneath. The flowers are small and white and bloom in short, dense racemes. The fruit is never larger than a pigeon's egg, generally oval, sometimes globular or obovate, and in color, green, reddish violet and black. An old olive tree becomes very valuable to its owner because of its prolific bearing. Generally, exuding from the older branches is a gum resin resembling storax and possessing an odor like vanilla, which is extensively used throughout Italy for perfumery.

The wood of these trees is highly prized by cabinet makers, for it is exceedingly hard and susceptible to high polish. It is greenish yellow in color with black cloudy spots and dark curving veins. The roots are of especially beautiful wood and many exquisite articles are made from them. The San Fernando trees have received no other irrigation than the winter rains since they were planted seven years ago, but they grow and bear splendidly with proper care.

About $225,000 have been expended in improvements on this great ranch. Recently a factory with all necessary machinery has been built on the premises, and here the olives

THE BOUGHS BENDING WITH FRUIT

A PICKER AT WORK

AN OLIVE BRANCH

will be prepared for market. Later on the company expect to build a distributing warehouse in Chicago, that will enable them to ship in bulk from California. It is estimated that each acre of the ranch will produce 2,000 gallons of olives this year. These will make 250 gallons of oil, which at two dollars a gallon will bring the owners a revenue of $500 an acre.

The longevity of the olive tree is proverbial, and its average lifetime extends over 250 years, though trees of far greater age have been known to thrive and bear bountifully. Some trees in Sicily have been known to produce 246 gallons of oil a year and to attain great stature, the trunks measuring twenty-six feet in circumference, and having an expanse at the top of fully 150 feet. In its wild state the olive takes the form of a thorny shrub, but after years of cultivation it dispenses with its attractive prickers, and becomes civilized, ornamental and fruitful. Of the oil producing countries in Europe, Italy is the largest, contributing to the markets each year 70,000,000

gallons of oil. Spain produces about 23,000,000 gallons, and France about 9,000,000 gallons. But millions of gallons of bogus olive oil are imported into the United States each year—oil in fancy bottles with alluring labels, telling of a purity that analyzers fail to find, for almost all the alleged olive oil imported into this country is said to be adulterated from forty-five to ninety-five per cent., and people have been imposed upon by cotton-seed oil, peanut oil and the lard brands of commerce.

Photographed by C. C. Pierce

AN OLIVE MILL AT CAPISTRANO

The demand for olive oil is becoming greater as time advances. For medicinal purposes it is thought to be preferable to cod-liver oil. It is extensively used in the manufacture of soaps, and is a valuable acquisition to the sardine industry of Southern California, the coast waters of which are superabundant with the genuine Mediterranean sardines.

The oil is extracted from the fruit by a purely mechanical process. The most favorable method is to grind the flesh from the pits without crushing the latter, for the pits have been found to contain but little oil and the practice of grinding them with the flesh tends to detract from the quality of the output. The best mills used for preparing the olive pulp are constructed of cast-iron and the crushing is done by a series of rollers. Presses of various patterns are brought into requisition for extracting the oil, some growers preferring powerful screw presses, while others use the hydraulic press or resort to the old-fashioned home-made lever presses, similar to the primitive cider press. When the olive pulp comes from the mill it is placed for pressing in sacks which are made in the form of a cheese, and are open at the centre of the top and bottom for filling and cleaning. In preparing for pressing, a series of wooden slats forming a kind of grating is first placed on the bottom of the press. Over this is laid a perforated, circular plate of iron, on which is put one of

the sacks. On the sack is placed another perforated iron plate and so on until six or eight sacks of pulp are placed one upon another ready for pressing.

The oil from the first pressing is designated as virgin oil, because of its absolute purity, and is always relegated to individual quarters, away from the contaminating elements of the second and third pressings. When the oil ceases to flow during the first operation, the pulp is removed and set aside until the next day, when it is reground and repressed. Water is often added during the second pressing, but the oil thus obtained is of inferior quality. A third pressing with the use of hot water removes any lingering remnants of oil, which is of the lowest grade, and sells cheaply.

The clearest and most brilliant oil is obtained by passing it through some compact filter, for which the common grey filter paper sold in circular sheets by druggists is usually used. In making the oil, absolute cleanliness is essential, for the oil readily absorbs all offensive odors. In gathering olives for oil it is imperative that they be picked at the proper stage of ripeness, for the best oil is obtained from olives not overripe. For pickled olives both green and ripe fruit are used. But the oil has one advantage over the pickles in that it improves with age and may be kept for any length of time.

An olive tree with clusters of ebony berries clinging among the foliage presents an inviting spectacle, but the fruit is indescribably bitter. As a result birds sing no exuberant song while mutilating the olive berries, and tramps find no satisfaction in denuding the trees of their fruit. An immense watermelon patch near by suffers many an invasion, but the olive trees are rigidly ignored by thieving man and mischievous bird. The pickers, then, have full sway, and the great harvest that comes from the largest orchard in the world is a new proof of the versatility of American soil and genius.

LOOKING OVER THE OLIVE ORCHARD

A ROAD HOUSE NEAR NOME

CARRYING THE MAIL FARTHEST NORTH

THE FIRST DELIVERY TO THE POST OFFICE AT KOTZEBUE, ALASKA — SLEDDING A THOUSAND MILES OVER SNOW AND THROUGH STORMS — THE CITIZENS OF OUR NORTHERN TERRITORY

BY

FRANCIS H. GAMBELL

LAST year the Government decided to send mail to Kotzebue, Alaska, and in early March the carrier, W. S. Flanagan, and I started for our thousand-mile journey over the ice fields. The course was from near St. Michaels in a northeasterly direction to Kotzebue, returning by Cape Prince of Wales, Port Clarence, Teller, Nome, Golovin Bay and Norton Bay.

Our train, consisting of six heavily coated Alaskan dogs, drew the mail, our deerskin sleeping sack, food, a shotgun, snow-shoes, cooking utensils, a stove and other supplies upon a light birch sled built for this special trip—a load altogether of three hundred and sixty pounds, which would gradually diminish as we proceeded.

On our first day out we met a stiff north breeze. The thermometer showed four degrees below zero. About noon the wind increased, and as I turned to talk to the carrier he informed me that my chin was badly frozen. It took some time to thaw it out with snow. Shortly after we stopped long enough to make a cup of tea and ate a few cold biscuits and doughnuts. In the afternoon the wind blew so hard that it became necessary at times to creep from one snow patch to another on the wind-swept ice, and we did not arrive at the "bunk" house, thirty-five miles from our starting point, until long after dark.

A "bunk" house is an Arctic hotel made of logs, with moss chinks, a dirt roof and a dirt floor. A sheet-iron stove keeps it warm. Two rows of bunks covered with grass or brush extend along the walls. The old-fashioned string and latch hold the whip-sawed

ON THE OCEAN OF ICE

door closed, and there is a place to cook the meals. Staying over night costs a dollar.

We made an early start in the morning, but the wind was so strong that we were glad to stop in a native cabin after eighteen miles of hard travel. Afraid that our dog food would run short, I obtained twelve ptarmigan, at twenty-five cents apiece, from the natives. The dogs on the trail are fed but once a day, and the two birds we threw to each were quickly devoured, feathers and all.

The next day was bright and clear with but little wind and we reached the mouth of the Koyuk River at the head of Norton Bay, the point where our portage across to Kotzebue begins. We surmised that now the worst part of our journey was to begin, for often the soft snow is so deep that only a few miles can be made each day and those are miles which represent the packing of a trail with snow-shoes for the dogs and sled. But we were fortunate. Strong winds had so drifted and packed the snow that it supported easily the weight of dogs and supplies. In the evening of the first day upon the portage, just as the sun was losing itself from sight behind the snow-clad mountains, we found a lone log cabin nestled in among the tall pines upon the bank of the river. It was deserted; the door was half open and snow lay upon the floor, but it was protection. Our fire was soon going, and we made a stew of some birds we had shot during the day.

We were hardly asleep when two of the dogs began fighting viciously, but they soon stopped. Indeed, I know of no animal more fond of fighting than the Eskimo dog. It is their mode of making each other's acquaintance. I have seen three

THE AUTHOR'S GUIDE INTO KOTZEBUE

A HOUSE BY THE ROADSIDE

ON THE NOME STREETS

full teams join in one universal fight while in the harness.

The next morning was bitterly cold, and we were to cross the divide from the Koyuk over to the right fork of the Buckland. The ascent was a long, gradual slope down which a small creek came. By noon we were on the divide, but above the timber line. We

OPEN WATER AT TOP-KUK

could see the trees, though, on the river from which we had come and beyond in the direction we were traveling. We stopped only a minute for lunch, for we knew of an *iglov*, or native underground house, on the river below us and wished to reach it that night. All the afternoon we hurried on, and had half made up our minds to camp in the snow when, as we rounded a bend, we saw a mound of snow on the river bank. It had no door and no windows, but the snow was banked on dirt walls. Spruce boughs within made good beds, however, and after supper we slept the sleep of the tired.

The next day we passed through a country noted for ptarmigan, the Arctic prairie chicken. They would fly up before us in flocks and, lighting on bushes, would appear as great snowflakes dropping from the sky. During the winter season they frequent the streams, for they live on the buds of the trees and bushes. This was our third day of traveling without seeing anyone, but that night brought us to three native *iglovs* where the women sewed and patched our boots, cooked our dog feed, carried us wood and water and gave us the stove to cook upon. They besieged us with curios in trade for a handful of sugar, a cupful of tea, some crackers, until we feared for our supplies; they showed us their skins of fox and marten; brought the sick to be healed and when bedtime came gave us the platform or bed while two of the boys slept on the floor.

The following morning as we started out in the light of the waning moon, the cold was intense. It grew colder during the day, and as night came on there was an "Arctic fog" all about us. The mercury must have been somewhere between fifty and sixty below zero and we could see no shelter. Luckily a mound on the riverbank turned out to be a deserted *iglov*. The dogs, upon being unhitched, immediately sought shelter in the most protected part of the *iglov* and rolled themselves up into a ball to keep warm. The hurry occasioned by unpacking the sled, gathering dry wood for a fire, and cutting brush for a bed kept us from freezing until the fire was started. While the carrier cooked supper, I found the dog feed and calling the dogs to me threw to each a dry salmon and a piece of frozen bacon. When my work was done I crawled into the sleeping sack dressed as I had been on the trail. When supper was ready I ate it with my hood and mittens on. But my tea got cold before I could drink it; the beans seemed never to have been warmed up; the fork froze to my lips. The biscuits and doughnuts were so hard that I first cut them up with the axe that I might be able to eat them. I was glad when my appetite was satisfied, glad when we could draw the hood of the sleeping sack over us and go to sleep. By noon next day we had reached salt water and on the day following we crossed the Circle.

Our last day out before reaching Kotzebue began with troubles. We started at 3:30 A. M., and as it was foggy we were quickly lost. We managed to reach a native dwelling and, standing on the top of it, I called down through the skylight to find if the folks were awake. They answered me and I went in through the long underground entrance. I asked the young man, whom I found inside, if he would be my guide to Kotzbue. He said that he would if I would leave some dry fish, tea and sugar. The snow was deep and the country rough, and the dogs' feet were sore. By noon we were not half way. No stop was made for dinner. We tried to make a short cut for the village but we became lost in the hills. It grew dark. We took the stars for our guide but there was no end to the hills. We stopped for consultation—the native had lost his bearings. We discussed whether we should wait until morning; but there was no wood, and we had neither eaten nor drank during the day; it seemed better to go on toward supplies. Suddenly our guide cried out:

"Me saby. Last summer me look plenty—river him all right. By and by we ketch em house." After a long time I heard, away off in the distance, the long dismal howl of the Eskimo dog. We had been traveling steadily for eighteen hours; but at last we delivered the mail and then sat down to the best supper we had ever eaten in our lives.

The natives here were very poor and destitute, and later on we heard that the fish failed to make their accustomed run and they had to cut up their skin boats for food. For two days we rested. On the third day, just as we were to start, the postmaster's wife came running in with the information that the natives had predicted a blizzard. We were to leave Cape Blossom and travel sixty

miles on the ice before we reached land again at Cape Espenberg and most of the time we should be out of sight of land. So we waited over another day, and bright and early we were off with a load to last us until we reached Cape Prince of Wales. All day long we trudged, working our way over the rough piled-up ice, now up, now down, breaking through the crust of snow and sinking to our knees. There was no landmark to guide us, and we had to depend upon the compass. During the day our stove was so broken by the sled jamming into an ice cake that it was utterly useless. Night came on with just a dim outline of a mountain away to the southwest and we camped behind a pile of ice.

Two days passed toilfully. On the evening of the third day we had reached a native village, where we made ready to put up for the night. All the natives came out to help us to carry the contents of our sled into the house. The sled we put up on the *cache*, out of the way of the dogs, that they might not eat the lashings, which were of seal thong. We entered like Santa Claus through the chimney, by which we dropped to the floor below. The room in which we had alighted was the vestibule for many rooms. One which opened to our left was the common kitchen, judging from the ashes in the middle of the room and the rude cooking utensils which leaned against the walls. I started to go into one of the tunnels in a stooping position, but the hood on my *parkie* scraped a handful of accumulated frost from the low ceiling down the back of my neck, and I continued the rest of the way upon all fours. I wiggled through the small opening into a room at the terminus, but not seeing any of our belongings tried another tunnel. This time I was more fortunate. This room, like the rest, was heated with seal oil lamps, and the heat from the bodies of human beings and dogs. The air was so empty of oxygen that a coal oil stove would not burn. We went into the kitchen and sat around the open fire, endured the smoke and cooked our supper. Then we went back to the living-room and found it pretty well filled with natives, among whom there was one chronic beggar who begged not only for himself but for every one around him. Some of the men who had been out fishing had returned and, squatting upon the floor, with a wooden platter of seal meat, some small frozen fish and a can of seal oil before them, were making their meal. Before going to bed they closed up the only opening to the house. There were fourteen people and two young dogs in that one small room, while the odor from the seal oil added to the stifling closeness of the air.

The next morning we started early in the hope of reaching a white man's house, of which we had been hearing for three days. Traveling along a little after dinner we met a native and his family. I asked him if he knew Electoona, the deer herder at Point Hope, and he said he did. And I knew Andreuk at Unoloklik, a man with whom he was acquainted. His wife took her pipe from a richly embroidered case and had a friendly smoke, while he very courteously asked me if my dogs were hungry, and upon my answering in the affirmative he gave them each a piece of whale meat to eat. Mr. Flanagan got a package of tea for our new acquaintances, we wished each other *bon voyage*, shook hands and were off. That night we did find a white man's house, which belonged to the commissioner for the mining district which had lately been formed.

In two days we reached Cape Prince of Wales, then Port Clarence and Teller, a new mining town, and at last came to Nome. Here were churches and schools and hospitals. Large store buildings lined the streets; residences and club-rooms were richly furnished; three newspapers were having a good circulation; horses hitched to fancy cutters were driven up and down the streets; men and women in the latest fashions frequented the churches, and at social gatherings doctors, lawyers and dentists were plentiful. Everything was cheap—flour $2 per sack, ham 17 cents per pound, eggs 25 cents per dozen, sugar 10 cents per pound, fresh potatoes 3 cents per pound, coal $35 per ton. The mail, which was being carried two thousand miles by dog team, via Dawson, was coming in every week, only two months old. The news that Queen Victoria was dead had but lately been received, and the flag was flying at half mast from the court house. With the telephones and railroad and the bustle and life it seemed almost like civilization. The journey home was made quickly and without incident. And so, through the snow and cold, we carried the first mail to Kotzebue.

THE GROWTH OF OUR NATIONAL FEELING

THE INTELLECTUAL AWAKENING OF THE UNITED STATES AS INDICATED BY THE EVENTS OF THE LAST HALF-DOZEN YEARS

BY

CAPTAIN ALFRED T. MAHAN

IT has often been remarked, as a curious coincidence, that momentous events, directive of the fortunes of nations and of the world, are found to cluster about the end of our conventional centuries. The following brief survey of the incidents that have impressed upon the final decade of the nineteenth century a significance resembling that of its predecessors, prophetic of issues not yet fully to be foreseen, has been undertaken at the request of the editor of THE WORLD'S WORK—not by my own initiative. Thus much is said, because a hurried glance over my occasional writings, magazine papers, during the ten years in question has manifested to me with a start of surprise the singularly different points of view necessarily occupied by an American at their beginning and at their end, because of changes partly foreshadowed at the earlier day when I began to write.

It was in August, 1890, that the editor of the *Atlantic Monthly*, Mr. Horace E. Scudder, wrote to ask from me what proved to be the first magazine article I ever published. He referred to a very brief and casual remark in my book then recently out—"The Influence of Sea Power upon History"—touching the exposed condition of our Pacific Coast in the event of an isthmian canal being made. I had quoted in that connection the expression of a French admiral to me, during a cruise, that in our "little corner" of the world we did not need the military and naval preparation incumbent upon the nations of Europe. To this I added, "Yet should that little corner be invaded by a new commercial route through the isthmus, the United States in her turn may have the rude awakening of those who have abandoned their share in the common birthright of all people—the sea."

This reflection, which followed upon a summary of the consequences to Spain—and, it may be added, to France—of a like neglect, had caught Mr. Scudder's attention, and he wrote to know whether I could give the *Atlantic* a paper upon the following general argument. "The centre of maritime operations has shifted once from the Mediterranean to the Atlantic. It *may* pass in the *distant* future (my italics) to the Pacific. Meanwhile, would not the completion of a canal, taken with the British movements at the terminal of the Canadian Pacific, the occidentalizing of Japan, and the growth of Australasia, immensely quicken the process? and, if so, will not the Pacific Coast of our country become a far more important factor in our historical development than it has been?"

The canal as yet is not, though it has very measurably advanced through the tedious stages that precede undertakings the importance of which is rather national than corporate, and which therefore do not find their support in private enterprise; but how much of what is here outlined has passed from the realm of speculation to that of action? and how little distant does that future now appear as compared to the anticipations of 1890? In writing on these themes in those days one felt that, while the chain of reasoning was eminently logical, yet there was a lack of solid foundation; that though argumentation were sound, premise was perhaps mistaken; and that when indulging in such forecasts one was in the fantastic sphere familiarized to us by Mr. Edward Bellamy and others. But what events have since happened, bringing the abstract conceptions of theorists and extremists, as they then seemed, down to earth in very concrete realization! What once were visions are now accepted as solid present matters of

course by our very practical nation. They have almost ceased to excite vivid interest, because of a familiarity which eliminates surprise. The condition, however, if no longer novel, is one so substantial that it can never again in our day pass out of sight, or out of national consideration.

Since Mr. Scudder wrote, the occidentalization of Japan, in methods although not in national spirit—which changes much more slowly—has been fully demonstrated to an astonished world by the war of 1894 with China. It is one of the incidents of the closing nineteenth century. To this achievement in the military sphere, in the practice of war which Napoleon called the science of barbarians, must be added the development of civil institutions that has resulted in the concession to Japan of all international dignity and privilege; and consequently of a control over the administration of justice among foreigners within her borders, not heretofore obtained by any other Oriental State. It has thus become evident that the weight of Japan in the international balances depends not upon the quality of her achievement, which has been shown to be excellent, but upon the gross amount of her power. Moreover, while in wealth and population, with the resources dependent upon them, she may be deficient—though rapidly growing—her geographical position relatively to the Eastern centre of interest and her advantage of insularity go far to compensate such defect, and to confer upon her as a factor in the Eastern problem an influence resembling in kind, if not equaling in degree, that which Great Britain has held and still holds in the international relations centring around Europe, the Atlantic and the Mediterranean.

Yet the change in Japan, significant as it is and influential upon the great problem of the Pacific and Asia, is less remarkable and less important than that which has occurred in the United States. If in the Orient a nation may be said to have been born in a day, even so the event is less sudden and less revolutionary than the conversion of spirit and of ideals—the new birth—which has come over our own country. In this are evident a rapidity and a thoroughness that bespeak impulse from an external source, rather than any conscious set process of deliberation, of self-determination within, such as has been that of Japan in her recognition and adoption of material improvements forced upon her attention in other peoples. No man nor group of men can pretend to have guided and governed our people in the adoption of a new policy, the acceptance of which has been rather instinctive—I would prefer to say inspired—than reasoned. There is just this difference between Japan and ourselves, the two most changed of peoples within the last half-century. She has adopted other methods; we have received another purpose. The one conversion is material, the other spiritual. When we talk about expansion we are in the realm of ideas. The material addition of expansion—the acreage, if I may so say—is trivial compared with our actual possessions or with the annexations by European states within a few years. The material profit otherwise, the national gain to us, is at best doubtful. What the nation has gained in expansion is a regenerating idea, an uplifting of the heart, a seed of future beneficent activity, a going out of self into the world to communicate the gift it has so bountifully received.

In this connection, and in emphatic contrast of past with present, how very apt is the expression of the French admiral—our "little corner," or the Jack Horner of nations. How accurately did the phrase then represent our own estimate, and that of the outer world, concerning our political and international exposure, responsibilities, and duties, in days when the ideas, imperialism and anti-imperialism, had scarcely received formulation. I remember that imperialism had not long before been associated in my mind with certain vague impressions of Mr. Blaine and his supposed projects. As far as my own views went, I might say I was up to 1885 traditionally an anti-imperialist; but by 1890 the study of the influence of sea power and its kindred expansive activities upon the destiny of nations had converted me, and my new faiths, thus originated, colored the first of my writings, as they have continued to do the rest.

The natural tendency of the line of thought which leads up to the appreciation of sea power and to the vision of expansion of national influences—rather than of national possessions—when acting upon a person inheriting Anglo-Saxon political traditions, is in commercial matters towards freedom of trade. Mr. Blaine, a protectionist by antecedents and

by party affiliation, as his mind expanded to embrace the idea of an American system, inevitably moved on to modify the idea of protection to that of reciprocity. Reciprocity is far from being free trade; but in principle it is nearer to that than to protection. Reciprocity has abandoned the view-point of exclusive interest, which is the citadel of protection, to embrace that of mutual benefit, the cornerstone upon which the advocates of freedom of trade rest their argument.

The beneficiaries of protection see this clearly enough, as is shown by their recent capture of the Reciprocity Convention and renewed proclamation of their favorite dogma. But protection is essentially a defensive measure, and in all struggles, in commerce as in war, it is not defensive action but offensive—conquest, expansion—which ultimately wins. It is in truth this factor of offense shown in the activity of the American mind, in the energy with which it carries ideas into practice and in the flexibility which readily embraces improvement, that has won the superiority which enables us latterly to invade the markets of the world. The credit is claimed for protection and is too easily yielded because the coincidence of our advance with the protective system confuses thought; but it is easy to see that, left to itself alone, the assurance of an adequate market—the secured home market—removes that necessity which is the mother of invention, the necessity which competition imposes. American inventive aptitude and American energy have triumphed over the enervating influence of the protection that would and long did restrain them from efficient action without their own borders, and in so doing hindered that development of sea power, commercial and naval, which expansion, material and moral, requires. Reciprocity, increased freedom of movement, is the logical corollary of expansion, which itself is but increase of scope and power to act.

It is, therefore, not a disconnected feature of the situation that reciprocity is no longer the idea of the few, but has assumed a conspicuous place in the thought of a party and of a leader—President McKinley—whose very names have been synonymous with protection. It is but another aspect of that mysterious, subtle influence, already vaguely felt in the early years of the last decade of the nineteenth century, and then, before its end, bursting suddenly into life and taking definite form in the acceptance of national expansion—territorial, political, naval, commercial. In every one of these aspects we find not merely development, but extension; not merely growth from what has been, but the grafting on of that which before found no place in our national conceptions. It resembles the breach of continuity between the middle ages and modern times. Our development on former lines has reached into maturity and, unless renewed by fresh influence, would pass into decadence; that which now succeeds it is new life, not new growth. In the Philippines, Porto Rico and Hawaii, we have territorial expansion. They, as well as Cuba, require us to constitute and establish political relations of a kind not heretofore admitted as compatible with our scheme of existence,—in short, expansion of political thought. These changed conditions have necessarily entailed naval expansion; and there can be little doubt that they will also imperceptibly—perhaps the protectionist may say "insidiously"—promote reciprocity of trade, expansion of commercial thought, with the logical consequences that follow the admission of a new principle.

Mr. Scudder named my first article, "The United States Looking Outward." It was particularly apt, for it exactly described the national attitude then. We were looking, but we had not got beyond that point where a baby vaguely follows with its eyes something which has caught its attention but not entered its understanding. Yet I have felt it significant, then and now, that in casting round for a starting point I, with all my professional prepossessions naturally maritime and military, should have opened my theme, not by a discussion of the naval or strategic situation, but by indicating the essential feebleness of a commercial policy which was primarily—nay wholly—defensive, and in which aggression, expansion, found no place. I quoted joyfully Mr. Blaine's words, "It is not an ambitious destiny for so great a country to manufacture only what we can consume, or produce only what we can eat," and I had pleasure in likening the extravagances of the then recent tariff legislation to Napoleon's Continental system,—a prophecy by implication which it must be admitted has not yet received fulfilment.

There has, however, been realized so much of the other indications of the future in that article, so much beyond what I dared to expect in my time, that I am not without hope that herein also I may live to see results. This article some half-dozen years later was gathered into a book with a series of seven others on kindred topics, all falling under the general head of arguments for expansion; not, indeed, specific in detail, but I think not without clearness in the enunciation of principles governing its general direction and character. The very enumeration of the successive titles has particular interest, as bearing upon the gradual expansion of the nation's thought, the gradual, though very rapid, development of policy; because in none save one, and that the last of all, did the suggestion come from myself. In each case, as in the first, the article was elicited by the request of the editors, whose perceptions were quickened by their need to watch the trend of events and provide the public with matter concerning which its interest was stirring.

Of course, naval officers, moving round the world, talking with its inhabitants in various hostilities and afterward bringing the various views to the common exchange of the mess table and of other professional intercourse, imbibe a good deal of information particularly pertinent to the question of expansion, needing only digestion and arrangement to have a usefulness quite peculiar to itself. It was therefore pretty full of matter, and to this day I remember the delightful ease of production due to that fact as contrasted with some heart-breaking work done since. Nevertheless, for the reasons noted, the record of [illegible] not my development, but the [illegible] awakening from 1890 to [illegible] to the eve, that is, of the great year [illegible] old things passed away, and all things [illegible] in the birth of a new national [illegible] into life by the crash of a [illegible] and the devolution of its re[illegible] conscience. In some [illegible] the circumstances of my [illegible] through the solicita[illegible] though by no [illegible] from time to [illegible] the antecedent process of [illegible] the advance of ideas, as [illegible] saw that advance had been made, but needed definition and formulation.

As far as known to me, "The United States Looking Outward" attracted no special attention in any quarter. The only comment I can now recall was by, I think, a Protectionist sheet to the effect that it seemed to be an argument for free trade. This critic apparently had not got beyond the first two pages. Yet the other topics, incidentally touched or more fully developed, need only to be named in order to show the most casual reader of today the important possibilities involved in the external objects demanding the consideration of the United States in 1890. Samoa; Hawaii; German commercial and colonial push in the Caroline and other islands near the Philippines, which the empire has since acquired by purchase; the progress of German influence in Central and South America, notably in the southern province of Brazil; the increasing importance of the Pacific and the effects upon it of an isthmian canal; the political wisdom of maintaining with Great Britain a cordial understanding, approaching coöperation, though distinctly rejecting the idea of alliance; the question of purchase by European powers of stations in the West Indies, such as the Danish St. Thomas and the Dutch Curaçao; the strategic features of the Gulf of Mexico and the Caribbean Sea, with the transcendent military value of Cuba and Jamaica in that connection. As regards these external points the United States was perhaps looking outward, but she evidently was not, as a nation, taking notice; and my remarks that "whether they will or no, Americans must now begin to look outwards," rested upon the necessities of the case as set forth, not upon any certain evidence of such watchfulness begun.

The first really arousing event occurred where naval officers had long recognized the most critical of our external interests; the one where political change of condition detrimental to our military security was most likely to occur and to be allowed by default. The islands and mainland of America were fairly covered from serious aggression by national susceptibility, pointed in the phrase "the Monroe Doctrine." What the doctrine was was perhaps not very clearly understood, but it was a good war-cry and might be depended on to serve its turn, although the experience

of generations had shown it impotent to insure naval expansion adequate to enforce its assertion. Hawaii, however, could not be construed to fall under the Monroe Doctrine; and, although many men in the country appreciated its consequence to us, it was not certain that the people generally would sustain an active policy based upon the need of our predominance there.

It is not necessary to recall in detail the occurrences in Hawaii at the end of 1892, which led to the treaty of annexation sent to the Senate by President Harrison, and withdrawn upon the change of administration by President Cleveland. What then occurred was the outcome of conditions which had led me in my first article to say, "At this moment internal troubles are imminent in the Sandwich Islands, where it should be our fixed determination to allow no foreign influence to equal our own." The submittal and the withdrawal of the treaty in rapid succession demonstrated the doubtful attitude of national opinion in 1893, just as the annexation of five years later showed, not growth, but conversion. Nevertheless I have always felt the first abortive movement to have been the more conspicuous landmark. Though without result, it was the awakening; too late to seize the current opportunity, but not so late as to be unprepared for the events which the near future was to bring.

It may profitably be noted that the contrary decisions of the two administrations in this matter were prophetic of party fortunes. In the face of an emergency such as in 1893 arose in Hawaii, with its extravagantly mixed population, foreign not only in extraction, but in sentiment and allegiance, a political party which held that our action was to be controlled by a count of heads among them was evidently unable to deal with impending questions. I do not pretend to have foreseen the events that ensued between 1893 and 1898; but it was clear enough in 1892 that we had to look out into the Pacific and toward China, and that we could never there act efficiently with our intellects manacled by a conservatism which saw in the population of Hawaii a capacity for self-determination like that of the Pilgrims; and which failed to comprehend that Hawaii was an outpost of the utmost value in the Pacific, for the tenure of which, in the rapid decay of the aboriginal population, East and West were already striving.

This Hawaiian business drew from me, by request from the *Forum*, of which Mr. Walter H. Page was then editor, my second article, "Hawaii and Our Sea Power"; to which succeeded almost immediately an invitation from the *Atlantic* to treat the question of the isthmus and its canal from the same point of view. The latter of itself, coming so quickly, indicates how the former affair had waked the people up, not to Hawaii alone, but to the broader issues of which Hawaii only happened by special circumstances to become the exponent. I do not think I erred then in saying, in the first of these articles, with reference to Mr. Harrison's treaty, "The United States now finds herself compelled to answer a question—to make a decision—not unlike and not less momentous than that required of the Roman Senate when the Mamertine garrison invited it to occupy Messina, and so to abandon the hitherto traditional policy which had confined the expansion of Rome to the Italian peninsula." "What is here involved is not so much a particular action as a principle pregnant of great consequences."

A reasonable regard for the patience of readers, and for the proprieties, limits me to mentioning simply the titles of the articles asked from me in the successive years 1894, 1895, 1896, 1897; indicative not only in their particular subject, but in the very order of the series, of the awakening consciousness of the people, reflected in the attentive minds of editors. They were, "The Possibilities of Anglo-American Reunion," "The Future in Relation to American Naval Power," "Preparedness for Naval War" and "A Twentieth Century Outlook."

The last decade of the century carried the outward look on from the Isthmus and Hawaii, and from the naval preparations essential to maintaining the nation's requirements, as formulated in the Monroe Doctrine and evident in the conditions of the Pacific, to consider the general outward movement of the European world, evinced in the new era of colonization and the search for naval stations that had recently begun. This impulse, I believe, will hereafter be recognized as the chief among those transmitted by the nineteenth century to its successor. Viewed with the new and significant restlessness

among the Oriental peoples, aroused at length, by intimate contact with Europeans, from the torpor and changelessness of ages—an awakening of which the occidentalizing of Japan is merely the most conspicuous incident—this is the significant feature of the opening century, that should direct the attention of our people in external policy. This European movement has three principal fields: the Levant—in which Egypt may for convenience be included—Africa, and Asia. Though locally Asiatic, the Levant is a European interest, pure and simple; and Africa, in relation to world politics, is but an annex of Europe, geographically as well as, now, by preëmption. Eastern Asia, however, and China especially, with all its immense possibilities, stands over against us, demanding our most careful and constant thought; all the more because there would appear to be a disposition in some quarters to question our right of interest. In a Parliamentary blue book published some eighteen months ago with reference to the incipient troubles in China which afterward became so acute, the Russian ambassador at Peking is mentioned as saying to his British colleague that only Russia and Great Britain had serious interests in China. We shall not err greatly, I imagine, in believing that Great Britain does not share this sentiment.

As a matter of national decision Hawaii is already past history, and the Monroe Doctrine seems even now to be approaching a condition of general silent acquiescence which, if realized, will give to it also the quality of permanence that distinguishes the present. The living external issue of the present and the future, the field for us alive with multifold possibilities and uncertainties, is Eastern Asia; so far in 1901 have we traveled, in the eight years that began by seeing even Hawaii rejected and have ended with the Philippines possessed. The elements of the situation in China, as determinative of national watchfulness, may be stated as follows. The great stream and valley of the Yangtse Kiang is the natural focus of trade for the greater and richer part of the empire which it divides roughly into two halves. It is navigable continuously by steamers for a thousand miles and for a great part of that distance by sea-going vessels, including large ships of war. Here, therefore, is the great commanding interest of commercial nations and of maritime Powers. Here, and here only, apart from the seaboard itself, can they effectually assert their force to control infringement upon China's right of self-direction and to support the Chinese themselves in their resistance which, unaided, has not been able to retain Manchuria. The maritime Powers are several; but of them France has seen fit to identify her policy with Russia and cannot be depended upon, even if her irritable national sensitiveness permitted other peoples to count upon the reasonableness of her action in any particular case. Regard for the interests of China, of the commercial world at large, and of our own people, therefore impel us to coöperation with Great Britain, the greatest of naval states, whose aim as a free-trade nation with large carrying trade must necessarily be to increase the volume of commerce in a country like China, and to support her against the encroachments of another people, of whose policy exclusive trade is a dominant factor. For the same reasons, though to a less degree, we find ourselves impelled to act in this matter in unison with Germany and Japan. As the world is now balanced, the British Empire is in external matters our natural though not our formal ally.

The canal, Hawaii and the Philippines are valuable to us as positions even more than as possessions. In the problem of Eastern Asia, still in an early stage of its solution and of doubtful issue, they are important as facilitating our access to the seas of China and to the valley of the Yangtse, and as furnishing territorial support to our action there. Intrinsically, their future now presents but few elements of anxiety. In the grave uncertainties surrounding China, it is along the great river, of which Shanghai is the chief port, that the interest of the western world centres. From it our eyes should never wander. There rests the centre of Chinese power as susceptible of future development, and there it should receive firm support from us, disregardful of the place where the Chinese Court may see fit to establish its abode. Peking, as has been clearly shown, is too easily controlled from the land side. Partition is one thing which we may well reject; but it would be very different to see established along the course of the Yangtse a native Power strong enough to resist dictation from the capital and, if need be, strong enough also to resist those by whom the capital may be oppressed.

COALING THE *AMERICAN* OVER A PLANK WALK

AN APRIL ICE JAM

HOW THE ICE KEPT THE LAKES CLOSED UNTIL MAY

BY

JUDSON GRENELL

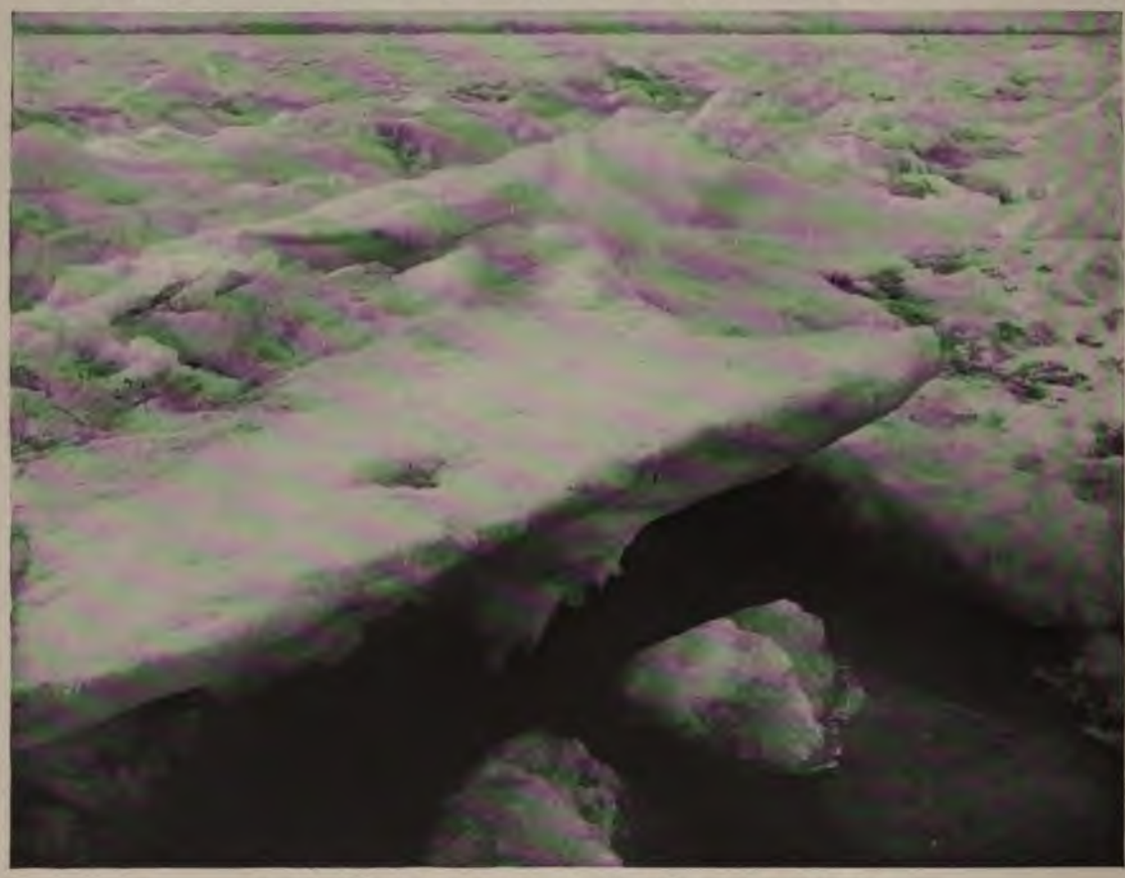
EVERY spring the vessel owners of the Great Lakes watch for the clearing of the Straits of Mackinac of ice, for this has been accepted as a certain sign that navigation is open. When the narrow channel between upper and lower Michigan showed water instead of ice—that was interpreted as meaning an uninterrupted passage between Lake Michigan and Lakes Huron and Erie. But on April 14 last year, the Steamer *Pentland* safely passed through the Straits only to strike an almost impassable barrier of ice lower down, that held her for the better part of a month.

The St. Clair River, connecting Lakes Huron and St. Clair, is thirty miles long and about thirty-five feet deep. When the *Pentland* forged her way through Lake Huron she struck a solid mass of ice, estimated to have been fifteen miles across, and extending unbroken to the foot of the lake. She was joined by a number of other boats which also had anticipated no trouble in reaching the lower lakes. They were all in danger for several days, but by cautious work they were saved. Not until April 29, however, did the first boat pass Detroit from the upper lakes. On May 1, fourteen others managed to get through, and then the river again closed up solidly, and remained in that condition until May 8.

It was a strange scene that greeted the

dwellers along the St. Clair River during this ice jam, and every day the electric line of cars, running between Detroit and Port Huron, took out loads of excursionists to see the sight. The banks of the river were green with grass, and the foliage made the landscape charming. Yet the river itself was one great mass of crystal hummocks, and resembled a glacier. Meanwhile the women, in summer dresses and with sunshades, gazed and gossiped on the silent crafts in midstream that were held by ice. At night when the boats were illuminated, it was a fairy scene on the ice.

Beyond a short bend in the river at the narrow entrance to the canal, the ice became so jammed that even the warm days of April could not dislodge it. As the wind swept more great cakes into the river they were forced to the bottom until the stream became a solid ice pack. Above the jam the water rose, of course, but below the water receded so far that long stretches of shore were laid bare, and the barges transporting railroad cars between Detroit and Windsor had to exercise great caution not to run on bars never before discovered.



A NEAR VIEW OF THE ICE JAM IN THE ST. CLAIR RIVER

During the time boats had been clearing from Buffalo, Chicago, Cleveland, Milwaukee and other ports, expecting that the ice jam would certainly break before they reached the St. Clair river. Thus a great fleet of freighters were held at Detroit and Port Huron, or went still closer to the wall of ice, until it was feared that when the release did come it would do great damage.

One of the boats stuck in the ice between Port Huron and the Government canal was the steamer *Northwestern*, trading between Chicago and European ports. Solidly built as is this vessel, and able to go where others could not follow, yet even she stuck in the lower end of the canal, and had not the ferryboat *Pleasure*, which plies all winter between Detroit and Windsor, and is built

for ice-breaking purposes, come up from Detroit with a party of excursionists, and obligingly cut her out, she would have consumed a considerably longer time than she did on her first voyage to the old world. Few people realize the amount of ice thatwas packed in the St. Clair River for twenty-two days.

When the ice jam broke for a few hours, on April 14, at the Government canal, it was a wonderful sight. Pouring out of the cut at the rate of ten miles an hour, it had such an impetus and solidity that it was able to retain its form for a considerable time, so that the stream was actually from five to seven feet higher than the lake. In the canal the icy current proved irresistible. The steamer *Arundel*, running between Detroit and Port Huron, tried to make headway against this grinding mass, but with a full head of steam on she would get started only to be pushed back into the lake. After making repeated attempts the captain at last reluctantly acknowleged himself defeated, and made his way back to Detroit.

What has happened once may happen again. Since no one can tell how the April winds of 1902 will blow, so no one is sure whether hereafter the opening of navigation will date from the clearing of the Straits of Mackinac or of the St. Clair River.

CAUGHT IN THE ICE
The *Northwestern* in the Government Canal

ACROSS THE ICE TO THE *AMERICAN*
The men in the small boat at the left are making the trip to the steamer

DOCTOR LYMAN ABBOTT

BY

HAMILTON WRIGHT MABIE

DR. ABBOTT'S extraordinary working power is significant of a quality of his nature which impresses itself on all who come in contact with him, a singular poise and serenity of spirit. He saves force by avoidance of nervous and emotional waste and is able to put his entire strength into his work. This salvage is effected not through coldness of temperament or lack of active sympathy, but through fundamental repose and harmony. A very sensitive man, of slight physique, with small muscular strength and intense mental activity, Dr. Abbott would perish by sheer exhaustion of vitality if he were not almost perfectly adjusted to his life and his task. Those who have seen a great experience strike him have realized how fragile his body would be without the support of his spirit. When such an experience comes he seems to withdraw into some secret place where there is abundance of strength.

A man bred in purely conventional ideas of religion once said of him, by way of dissent and criticism: "Why, Dr. Abbott believes that God is as much with him as He was with Abraham." This is precisely the faith in which Dr. Abbott lives from day to day; and this faith is the secret of his repose. It is both a refuge and an inspiration; the explanation of his serenity, and also of his courage, his ardor, his power of leadership.

The harmony which he has established between himself and his tools, his work and his world, he owes in part to his ancestry. He belongs to the class of men who, like Emerson and Phillips Brooks, build on ancestral moral foundations. For such men the questions of personal character seem to have been settled in advance, and they are left free to put their full force into work. Born with a harmonious moral nature, men of this supreme good fortune need waste no time on themselves.

Dr. Abbott works without the slightest friction; although one of the most vital and spontaneous men of his time his mind has the exactness and rapidity of an exquisitely adjusted machine. He fastens by instinct on the central and formative fact or facts in the most confused situation or question, puts all subordinate matters aside, reasons with singular directness, and states both the process and the results of his thought with lucidity and simplicity. So easily does he work that when he has thought out his problem or reached his conclusion he regards the matter as finished; the task of writing out what he has to say is to him only a detail involving time but no labor.

His serene faith in the working out of a Divine purpose in the world and his complete adjustment to his work almost eliminate the element of self-consciousness. He is the most comfortable man in the world to work with because he never has any sense of ownership either in ideas or methods; he is eager for the best and ready on the instant to change his position or abandon his carefully worked-out plan if he is convinced that he is wrong or that there is a better way. This attitude explains the dispassionateness of his temper and the fairness of his spirit. In his work he is the most impersonal of men, entirely free from that irritating self-consciousness which makes many good people difficult to act with, and wastes so much active force for good. If Dr. Abbott ever thinks of his personal relation to anything he has done, those who stand nearest to him have never found it out. He is immensely interested in what he is doing, but when it is done he goes on to the next thing. He is a born climber; light of step, full of energy, eager to get on, never content with present attainment, full of curiosity and hope for the future, always ready for the next ascent. So engrossed is he in what lies before him that he carries no luggage of self-consciousness or self-satisfaction. This ardor for spiritual achievement keeps him constantly at high points of observation and explains the genius for prophecy which he has always possessed. He seems to know by instinct what is coming, and if a record of his

forecasts of the last twenty years were made it would show a surprising accuracy of foresight. The habit of looking ahead has apparently thinned the mist so that he sees in outline the large events and movements of the future.

Having unshakable faith and the power of vision which it develops, Dr. Abbott is a rational optimist; one who sees clearly present evils and obstacles, but is confident that the creative forces in society are making for the freedom and happiness of men and must prevail.

These qualities are found in all Dr. Abbott's work, which is of a piece, notwithstanding the very diverse forms which it has taken. As a journalist he is quick to fasten upon significant events and facts, to foresee advancing questions before they have defined themselves to the general mind, and to lead public interest while seeming to follow it. He has no interest or faith in devices of any sort, and implicit faith in the power of ideas not only to dominate but to interest. His search, therefore, is always for the idea, the principle; and he has great power in so presenting the idea, the principle, as to arrest the attention and to hold the interest. He never flatters his readers; he always stimulates them. His spirit is so dispassionate and his manner so reasonable that he keeps the confidence of rational people who differ from him. He consistently interprets current history from the religious point of view, from the point of view of one who believes that there is the perfect play of God's will through the world; that the moral laws are inexorable in spite of moral waste, blindness and crime; that there is not only a purpose but an increasing one in the affairs of men; that no truth is too sacred for universal use; and that nothing counts in the long run but the truth. As a journalist, therefore, he looks at affairs from the moral point of view, deals largely with ideas and principles, is vital and direct in manner, outspoken, progressive and constructive.

As a preacher he commands attention by transparent sincerity, by the confidence which he inspires that he will never go a step further in speech than he has gone in thought, by his conviction that God is not only in His world but in all parts of it at all times, by the appeal which he always makes to the reason of his listeners, by the simplicity of his manner and by a rare and beautiful eloquence which often descends upon his speech, born of the devotion and purity of his spirit, of the childlike attitude of his mind toward the great mysteries, and of the touch of imagination on his thought. There is at times something rapt and prophetic in his speech; and at other times, when sorrow is to be consoled or death interpreted, a beautiful tenderness which seems to bring peace and hope from near instead of remote places.

Dr. Abbott's fundamental ideas, his temperament and his methods are clearly revealed in a series of volumes which bear the imprint of Messrs. Houghton, Mifflin & Co. Delivered first in the forms of sermons or lectures the material presented in these books has been carefully worked over and may be accepted as a definitive statement of the writer's mature thought. In "The Life and Literature of the Ancient Hebrews," the development of a race and the record of its mind and experience in the Old Testament are explained and interpreted from the standpoint of a Christian evolutionist. In "The Evolution of Christianity" the principle of growth is applied as a key to the shaping of Christian thought, institutions and society. In "The Theology of an Evolutionist" the fundamental ideas of Christianity are restated as they have been modified and changed by the reconstruction of thought effected by the evolutionary conception of the development of man and society. In "Christianity and Social Problems" the spirit and teaching of Christ are applied to economic conditions and the problems of modern life in the industrial field. "The Life and Letters of Paul the Apostle" is a striking study of Paul as a man of essentially poetic nature in an age of dialectics, and an interpretation of his conception of Christianity as marking the divisive stage of its evolution into a world-religion. In the latest of this group of works, "The Rights of Man," Dr. Abbott, still following the lines of evolution, interprets the different orders of political organization from the Christian standpoint, affirms his faith in democracy as the logical outcome of the Christian view of man, and frankly discusses current questions.

As a thinker Dr. Abbott would have been classed not long ago as an intuitionalist; one who believes in the direct contact of the individual soul with God in personal experience,

and in the direct perception of truth. This underlying conception, accepted not only as a matter of faith but as a working hypothesis, has given Dr. Abbott the prophetic spirit and attitude; has led him to regard individual rightness as the first step toward social righteousness; to treat all institutions as instrumentalities for the liberation and development of men; to place the weight of emphasis on inspiration rather than on organization; to recognize growth in the entire field of man's life as the Divine method of dealing with him; to expect the changes in theology which growth inevitably brings; to judge forms of government by their success or failure in forwarding the interests of the race; to anticipate and welcome the continuous modification of social and industrial conditions which are inevitable if the law of growth has its way.

In a word, Dr. Abbott believes in God as the ultimate and immediate force, in the capacity of man to govern himself, in character and service as the only convincing evidences of the possession of the religious spirit, in the ordering of society not on a socialistic or communistic but on a Christian basis through the development of the sense of social responsibility and of the law of service and stewardship. He may be regarded as a broad-churchman in religion, a profound believer in the principle that government is not only by the people but for the people, and in the further application of the principles of Christ to politics, business and social life not only as inevitable but as the only conservative course.

Moderation and sanity are the notes of Dr. Abbott's temperament and attitude, as frankness and dispassionateness are the notes of his expression in all forms. He is a born truth-lover and truth-seeker, with remarkable working power, remarkable faculty of assimilation, and a natural gift of clear, persuasive statement. Those who stand nearest to him, and they only, know how inspiring his attitude and spirit are, how considerate of others and patient of interruption he is, how quick to recognize good work and cheer the worker, how completely absorbed in the endeavor to find the truth and to apply it with the courage of perfect trust. They only know also his modesty, his courtesy and his perfect fairness. He believes far more deeply in light than in heat as a means of influencing men, and it is as a light-bearer that he has served his generation.

INCREASING RAILROAD CONSOLIDATION

THE GRADUAL ABSORPTION OF LINES TILL THE COUNTRY IS DIVIDED INTO PROVINCES WHOSE TRAFFIC IS CONTROLLED BY FIVE SMALL GROUPS OF MEN — THEIR SEVERAL AREAS OF CONTROL — THE TENDENCY TOWARD STILL FURTHER CONSOLIDATION

BY

M. G. CUNNIFF

FROM a little wooden-track line along the Lackawaxen Creek, where the first locomotive in the country had its trial in 1829, the railroad systems of the United States have grown in seventy-three years to a network of rails which, straightened out, would make a single track extending eight times around the world. Visualize this eightfold girdle. Beside it a new track is progressing twelve miles a day on the ninth circuit. On every five-mile stretch is a locomotive with a train of eight cars. There are five men at work for every mile and two hundred and forty new men coming to work every day. The road carries more tonnage than all the ships on all the seas together with the railroads of the busiest half of Europe. From the lines that make up the imaginary manifold belt one wage-earner out of every fifteen in the country, directly or indirectly, secures a living for

himself and his dependents, if not as a fireman or a conductor or a superintendent, then as a locomotive builder or a steel worker or even one of the lumbermen engaged in hewing down the three thousand square miles of timber employed every year for ties. Upon the operation of the lines depends the success of farming, cattle-raising, manufacturing. So vast is the industry, and so closely bound up with American life, that the trend of recent railroad development toward a stupendous monopoly makes the "railroad problem" the greatest single industrial puzzle confronting us.

That monopoly will come, and come soon, is the opinion of many. Mr. C. P. Huntington, who was surely one of the greatest railroad men the country has produced, declared at a time when he had acquired the only complete transcontinental system ever controlled by one man, that this generation would see a consolidation not only of the lines west of the Mississippi but of all the railroads from coast to coast. "I shall not live to see it," he said in conversation with a younger man, "but you will. Economic conditions will demand it." And in the year and a half since Mr. Huntington's death railroad progress has simply jumped forward to bear out his prophecy, following his own methods. The Northern Securities Company has been hailed as something unique. It is merely a successor to the Southern Pacific Company which owned the long Huntington roads in the West—immeasurably vaster in capitalization, but novel in no other respect. Indeed, there have been mergers ever since the fifties not essentially different from those now going on.

The very history of American railroads is a tale of consolidation. Cheap roads were built in the thirties from town to town, much as our trolley lines are built. By 1850 the Eastern States were full of little lines, ten thousand miles of them, that bumped along from one town to another and then changed passengers and freight for the next town, where another transfer was made. Later, they were consolidated. The consolidations were fought in the State Legislatures just as vehemently as the Northwestern Governors have fought the Northern Securities Company, but they went on notwithstanding. We should have a curious system of railroads now if they had not—if passengers from New York had to change eight times to reach Albany and ten times between Albany and Buffalo, or even if eighteen arrangements had to be made for any through passage. In the consolidations, as railroads increased, the well-managed, conservative roads absorbed the badly managed ones. Overcapitalization, excessive bonding, rash expansion, brought hundreds of roads into the hands of receivers, and in the reorganization periods the firmly established roads acquired adjoining lines at little expense. While the systems in the East were slowly taking form, the transcontinental lines, backed by Government subsidies as the early roads had been helped by State grants, pushed their way across the continent "from Nowhere," their opponents used to say, "through No Man's Land to Noplace." The later ones, the Southern Pacific and the Great Northern, were still marvels of enterprise when the fierce rate-cutting that followed the Interstate Commerce Law of 1886, combined with other causes, brought such a railroad crash in 1893 that one fifth of the entire mileage of the country went into the hands of receivers. By the wiping out of excessive indebtedness that came with reorganization, by the merging of competing lines under unified control, and by the employment of economical methods of operation, the railroads have been placed since 1896 in the best condition they have ever known, with the cheapest freight rates, the best equipment, the fastest service, and the largest dividends in the world. In this period of prosperity the great systems grew to their present transitional form.

The Vanderbilts have merely expanded a system that Commodore Vanderbilt began; the Goulds have increased and strengthened Jay Gould's system; Mr. E. H. Harriman and the interests he represents are now in possession of the Huntington roads; Mr. Cassatt and his associates have marvelously improved the Pennsylvania that Col. Thomas A. Scott and others had made a great railroad; Mr. Hill, the only railroad builder among the financial giants now owning the greater part of the transportation lines of the country, has added to the Great Northern, which he built, the Northern Pacific and the Burlington, built up by Henry Villard, John M. Forbes and other men; and Mr. J. P. Morgan typifies in his great organizing powers, even better than Mr. Harriman, the force that has taken a multitude of railroads

from the hands of builders and placed them in the hands of financiers. The contemporary phase of railroad history is this last.

An approximately accurate list of the systems grown great by consolidation accounts for over 150,000 miles of the 200,000 miles in the country as shown in the accompanying table.*

Clear-headed financiers set about devising some means of stopping the rate-cutting that under the anti-pooling and anti-trust laws was driving the roads into bankruptcy. Whether Mr. Huntington or Mr. Morgan first evolved the community-of-interest idea, it was already in the air. The result was consolidation from 1896 to the present at an unprecedented speed. The Santa Fé was expanded by the merging of lines from a road of 471 miles in 1896 to one that now measures nearly 7,500 miles and reaches the Pacific Coast. By lease the New York Central acquired the Boston and Albany and thus reached Boston, a port whose business is rapidly increasing; and by purchase of a majority of the stock the Union Pacific gained control of the Southern Pacific. Syndicates represented by houses like J. P. Morgan & Company secured reorganized roads by such processes as getting themselves appointed voting trusts with power to manage the road for the stockholders. All these were common enough forms of consolidation. The community-of-interest idea exemplified by the

* MILEAGE CONTROLLED BY SYNDICATES

VANDERBILT SYSTEM

Road	Mileage
New York Central System (Including the main line, the Beech Creek, the Fall Brook, the Mohawk and Malone, the New York and Harlem, the Rome, Watertown and Ogdensburg, the West Shore, and many others.)	3,107
Lake Shore & Michigan Southern	2,084
Michigan Central (Including the Canadian Southern.)	1,635
New York, Chicago & St. Louis. (Nickel Plate) (Including the Pittsburg and Lake Erie.)	523
Chicago & Northwestern (Including the Chicago, St. Paul, Minneapolis & Omaha and the Fremont, Elkhorn and Missouri Valley.)	8,769
Cleveland, Cincinnati, Chicago & St. Louis. (Big Four)	2,287
Boston and Albany	394
Lake Erie & Western	725
Total Mileage	19,524

PENNSYLVANIA SYSTEM

Road	Mileage
Pennsylvania R. R. (east of Pittsburg & Erie) (Including the New Jersey lines, the Allegheny Valley R. R., the Philadelphia and Erie, the Northern Central, and many others.)	5,530
Pennsylvania R. R., (west of Pittsburg & Erie) (Including the Pennsylvania Company, the Peoria and Western, the St. Louis, Vandalia & Terre Haute, the Pittsburg, Chicago, Cincinnati and St. Louis, the Cleveland, Akron and Columbus, the Grand Rapids and Indiana, and others.)	4,405
Long Island	391
Baltimore and Ohio (Including the Cleveland, Lorain and Wheeling, the B. & O. Southwestern, and others.)	4,025
Total Mileage	14,351

GOULD-ROCKEFELLER SYSTEM

Road	Mileage
Controlled by the Gould-Sage interests	
Missouri, Pacific and Iron Mountain	5,372
International and Great Northern	891
Wabash (Including the Wheeling & Lake Erie, and the Omaha and St. Louis.)	2,968
St. Louis and Southwestern	1,293
Texas and Pacific	1,619
Rockefeller and Gould interests	
Missouri, Kansas and Texas	2,480
Denver & Rio Grande (Including the Rio Grande Western.)	2,301
Total Mileage	16,924

MORGAN-HILL SYSTEM

Road	Mileage
Controlled jointly	
Northern Pacific (Which owns twenty-three million acres of land.)	5,487
Great Northern	5,417
Chicago, Burlington and Quincy	8,171
Erie	2,605
Lehigh Valley	2,178
Controlled by Mr. Morgan	
Philadelphia and Reading (Including the Central of New Jersey.)	1,677
Hocking Valley (Including the Toledo and Ohio Central, and the Kanawha and Michigan)	882
Chicago, Indianapolis and Louisville	546
Southern Railway (Including the Central of Georgia, the Alabama, Great Southern, the Cincinnati, New Orleans and Texas Pacific, and the Mobile and Ohio.)	10,627
Total Mileage	37,590

CONTROLLED JOINTLY BY THE PENNSYLVANIA AND THE NEW YORK CENTRAL

Road	Mileage
Chesapeake and Ohio	1,616
Norfolk & Western	1,685
Total Mileage	3,301

BELMONT SYSTEM

Road	Mileage
Louisville and Nashville	5,188
Nashville, Chattanooga and St. Louis	935
Total Mileage	6,123

HARRIMAN-KUHN-LOEB SYSTEM

Road	Mileage
Union Pacific (Including the Southern Pacific, the Oregon R. R. and Navigation Co., and the Oregon Short Line.)	15,163
Chicago and Alton	918
Illinois Central	5,000
Kansas City Southern	873
Total Mileage	21,954

IMPORTANT INDEPENDENT SYSTEMS

Road	Mileage
Atchison, Topeka and Santa Fe	7,481
Chicago, Rock Island and Pacific	3,818
St. Louis and San Francisco	2,887
Colorado and Southern	1,142
Chicago, Milwaukee and St. Paul	6,461
Pere Marquette	1,747
Atlantic Coast Line	2,177
Seaboard Air Line	2,600
Plant System	2,207
New York, New Haven and Hartford	2,038
Boston and Maine	3,338
Total Mileage	35,896

New York Central and the Pennsylvania in the Trunk Line district and the Chicago & Northwestern and the St. Paul in the Old Northwest is a newer policy. In this community-of-interest arrangement the controllers of Railroad A own some stock in Railroad B, possibly have directors on the board, and the result is an understanding between the roads, without an actual community of ownership and without any pool within the meaning of the law. In the form of control illustrated by the Northern Securities Company a company is formed for the sole purpose of holding the securities of a number of roads—community-of-interest carried to the point of legal recognition and chartered responsibility. With full understanding, like that in the Harriman-Kühn-Loeb syndicate, such control is the closest form of community-of-interest holding. All these forms of combination have been recently exploited so fast as actually to double the mileage of roads like the Union Pacific and the Pennsylvania in the course of a year or two.

Clearly to understand the railroad situation in the United States, the country may be roughly divided by a line drawn from San Francisco through St. Louis to Newport News, and another down the Mississippi Valley from Chicago to Galveston, making four railroad districts. Through the Northwestern section run two vast railroads that strike westward from St. Paul to connect with steamships for the Orient at Seattle. Over them went the settlers that many "feeders" distributed in the prairie and mountain States, and east and west in long lines of heavy freight cars go the wheat and all the rich products of the great farm of the world, that these colonists win from the land. One of the roads, the Northern Pacific, still owns twenty-three million acres that will one day be settled. Connecting at Chicago for the East over the Erie, the Great Northern and the Northern Pacific furnish a line controlled by two men, Mr. Morgan and Mr. Hill, which not only runs from coast to coast, but connects at each terminal with steamship lines controlled by the same men, thus reaching more than half way round the world. In the Southern section Mr. Morgan has so firm a grasp, as the map shows, that it looks as if he would in time dominate the region. As the Southern Railway, moreover, connects with other Morgan roads running as far north as Buffalo, the Hill-Morgan interests are impregnably fortified in two of the four great railroad divisions, with outlets at all main ports.

In the Southwest the Harriman system grows stronger as the new line from Salt Lake creeps through the sage-brush toward Los Angeles. Up and down the Mississippi runs the Illinois Central, west of the Morgan sphere of control, and east of the Gould sphere. The possession of the shortest line from Chicago to the Pacific Coast via the Union Pacific and the Central Pacific throws a monopoly of transportation west of Ogden into the hands of the Harriman interests, possession of the shortest line from Denver to the Northwest gives domination along that avenue, and the Southern Pacific and its connections follow a nearly straight line from New Orleans to San Diego, and thence to Portland, Oregon. The Gould system, strong in the eastern part of the Southwest, is reaching out to the coasts by the Denver & Rio Grande in one direction, and by the Wabash in the other.

In what is known as the Trunk Line district the Vanderbilt and Pennsylvania systems dominate, with an outlet for the Vanderbilt lines to Boston, and feeders in the Hill-Morgan territory in the Old Northwest as far as St. Paul.

The very unsatisfactory and incomplete state of this whole arrangement is convincing enough evidence of its instability, even if there were not vigorous warfare going on or alliances in process of making to strengthen the position that each system holds.

In the Trunk Line district, President Cassatt of the Pennsylvania Railroad, and the Vanderbilts of the New York Central, have so carefully fostered pleasant relations by acquiring in common the Chesapeake & Ohio and Norfolk & Western to exploit the coal regions without friction, that the New York Central has been left to its far-reaching improvements, and the Pennsylvania to its vast expansion and its great undertakings, with no fear of war. But as the Hocking Valley, the Erie and the Lehigh, Morgan roads, compete with these larger systems; as the Lackawanna, a Rockefeller road, though acting in harmony with the New York Central is really an independent factor; and as the Gould roads, already assured of entrance into Pittsburg

over the Pittsburg, Carnegie & Western, are said to be seeking, thence, a line to New York, there is still room for the extension of the community-of-interest principle.

In the South four independent roads, the Louisville & Nashville, the Atlantic Coast Line, the Seaboard Air Line and the Plant System, and the Illinois Central as well, dispute the control of Mr. Morgan's Southern Railway. There is probably not enough business for so many lines. A "merger" would be the natural outcome.

In the West there has been open warfare. There is still rate-cutting in the region, and there has been also battling for control. The spectacular feature of the contest has been the rise of Mr. E. H. Harriman as a railroad man.

When Mr. C. P. Huntington was building the Southern Pacific and Mr. J. J. Hill the Great Northern, Mr. J. P. Morgan was a New York banker with a reputation as a financial organizer, and Mr. E. H. Harriman was another New York banker known among railroad men as the Vice-president of the Illinois Central. In the reorganization of the Northern Pacific by J. P. Morgan & Company, Mr. Hill and his friends bought more than a quarter of a million dollars' worth of stock in the reorganized road, which, after a brief competition with the Great Northern, practically joined forces with it. In the reorganization of the Union Pacific Mr. Harriman came into prominence by acquiring with Kühn, Loeb & Company the control of the line.

After Mr. Huntington died the Harriman interests by a brilliant financial coup obtained a majority of the Southern Pacific stock for the Union Pacific, and took over the system that Mr. Huntington had hoped would perpetuate his name. The inside history of the scattering of the Huntington control is a tale of a great opportunity lost by one syndicate and snapped up by another in a moment. By acquiring the Oregon Short Line and the Oregon Railroad & Navigation Company, the Harriman-Kühn-Loeb syndicate became masters of all Pacific Coast traffic south of Portland, with the exception of that pursuing the Santa Fé route, completed not long before. Last May came the tug-of-war. Mr. Hill invaded Union Pacific territory by buying the Burlington. Mr. Harriman retaliated by buying control of Mr. Hill's Northern Pacific, though the stock was "skied" to a thousand dollars a share in the operation. To adjust the trouble Mr. Morgan organized the Northern Securities Company, with a capitalization of $400,000,000, to hold the securities of the Northern Pacific, the Great Northern and the Burlington; and Mr. Harriman, Mr. Stillman and Mr. Schiff, of the Union Pacific, were made directors. Though this would seem to have ended the war, the retirement of the Northern Pacific preferred stock, now accomplished—the stock that gave the Union Pacific its control in Northern Pacific—may affect in no small measure the position of the Union Pacific in the Securities Company. It looks at the time of writing, then, as if the Hill-Morgan combination had secured a line competing with the Union Pacific by extending to them a community of interest which they did not desire to possess.

The key to the Western situation is the independent Santa Fé. Whichever interest secures it will dominate the Western trade. The Gould system, moreover, may build from its Western terminals to the Pacific Coast, just as it is said to be aiming at an Atlantic outlet by purchase. Western railroad affairs, accordingly, are highly unsettled. There is much competition. The decrease in business due to the partial failure of the corn crop has led to rate-cutting. Some community-of-interest *modus vivendi* can hardly be long delayed.

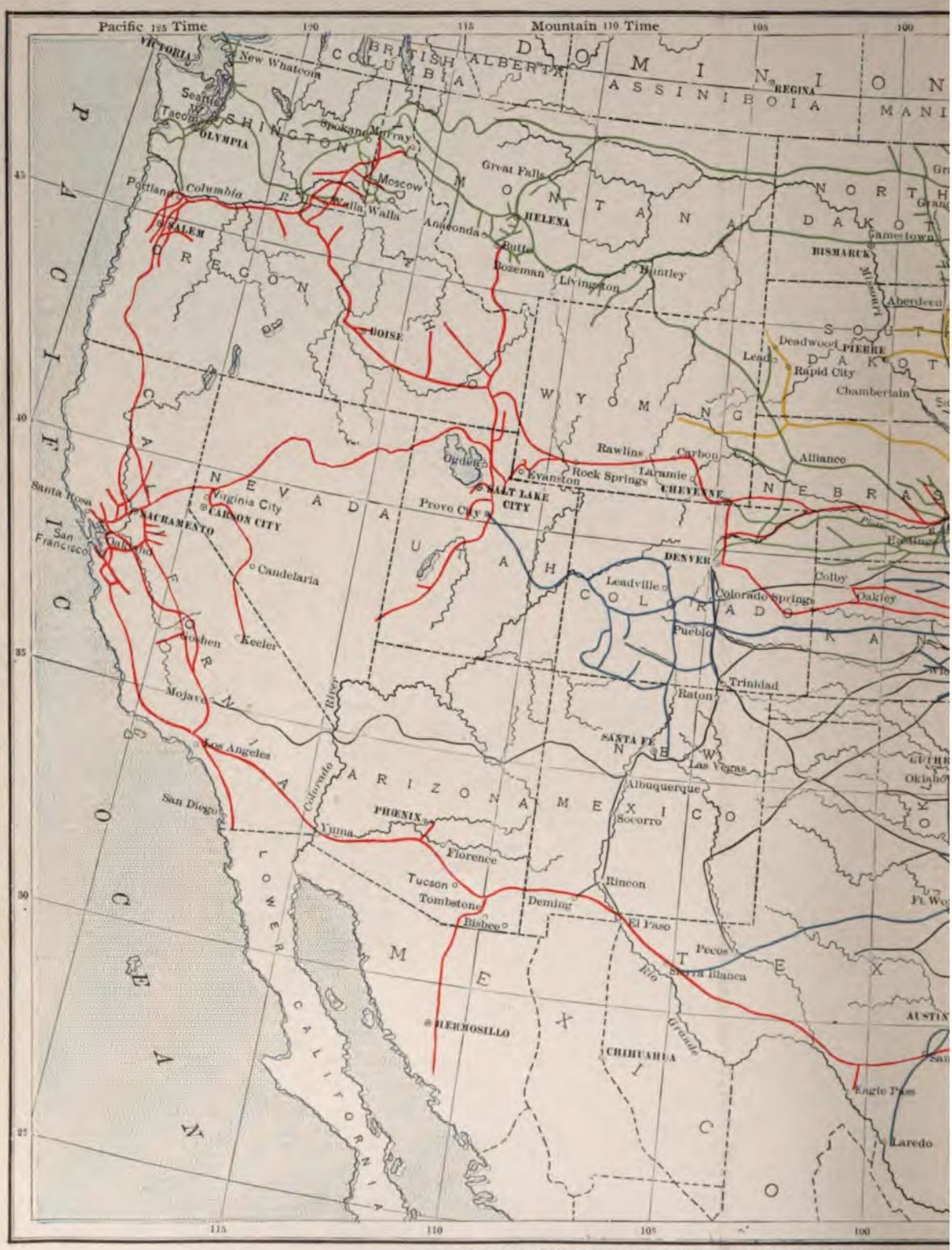
Here, then, is a vast continent belted and banded and criss-crossed with 200,000 miles of railroads. Many of the roads are great independent lines, and some are systems controlled by groups of men outside the five large syndicates. But practically half the stupendous network, affecting in one way or another every inhabitant in the country, is in possession of five little bodies of men with headquarters in New York. A strip of land hundreds of miles wide, beginning at the Washington ports in the Northwest and sweeping east to the lakes, is practically an industrial fief of Mr. Hill and Mr. Morgan. In Mr. Harriman's hands in some measure is the prosperity of California and the Southwestern States, as well as of a broad strip up the Mississippi Valley, a fertile band through the prairie States, and all the habitable land reaching west from the Rockies to the coast.

The Central Atlantic States live to the rhythm of the New York Central and the Pennsylvania Railroad. It is true that one can go from Boston to San Francisco, from the Gulf to St. Paul, and travel not a mile on the roads of the railroad giants, but only through a very narrow pathway and for the most part within view of competing syndicate lines on either side. And who that travels on railroads or receives freight from railroads or sends his products by railroads within our borders does not do so over the colored lines on the accompanying railroad map? When it is remembered, furthermore, that Morgan men are directors in Vanderbilt roads, Hill men in Pennsylvania roads, Gould men in Harriman roads, and that every other possible interweaving of common control exists throughout the great groups, the lines of demarcation melt away and we see dimly outlined a condition of affairs which may possibly take the hue of monopoly.

Thus far the unification of control has been a blessing. Where many sets of railroad officials formerly managed many roads from many centres, one set now manages a single system from a single headquarters. That means economy. The other day, for example, the Burlington, directed before the merger from three widely separated offices, concentrated its management in Chicago. Nor does such concentration spell the elimination of employees; the expansion of the railroad army at the rate of 240 men a day shows the opposite tendency. Vast capital has permitted of improved rails, bridges, locomotives and cars, the building of efficient terminals and the straightening of lines. Efficient management has produced such economical methods that foreign railroad men come here as to a school of railroading. And since unification of control is by no means synonymous with unification of ownership, the insurance companies, the savings banks, the trust companies and private individuals reap in the increased value of the stocks and bonds they own the benefits of the improvements. Skilful operation has resulted in lower freight and passenger rates, so that shippers and travelers have prospered with the prosperity of the railroads.

Twenty years ago shippers and even whole districts suffered from unfair discriminations in competitive regions, and from almost prohibitive rates in regions where single roads possessed a monopoly. The railroads of the country were carrying about thirty-five million tons of freight at a cent and a quarter a ton for each mile. Now the average rate is a little over seven mills and the tonnage is more than one hundred and forty millions. The tonnage has gradually increased; the rate has gradually gone down. The passenger rate has likewise gone down, and the passenger traffic is growing fifty million a year. Immigrants have been carried at a rate on which there is practically no profit, to develop the country fed by Mr. Hill's lines, just as Mr. Huntington carried them into California. Branch lines open up districts everywhere. Not all of the growth that this economy has produced came about through consolidation, for there are many independent roads that are run efficiently, cheaply and profitably, but it is beyond question that consolidation has been the main impetus to it all.

The railroad problem consists of working out the best method of conserving the advantages gained and securing more without allowing any institution to arise that shall injure the Republic. The Northwestern Governors believe that the way to do it is to go back to competition. Railroad men and the Interstate Commerce Commission favor pooling. A return to competition is a return to a wasteful economic condition. It will never pay either stockholders or shippers to have freight hauled over a mountain road, simply to preserve the competitive principle, if there is a valley road alongside. Pooling might preserve the *status quo* for a time, but it may be questioned how long it would last. Suppose the case of a pooling arrangement between the Southern Pacific and the Union Pacific two years ago. Would that have prevented the Harriman interests from securing the road when the time was ripe? A pooling arrangement, moreover, is wasteful in cases where a direct line divides freight with a roundabout line that cannot haul it so cheaply. The shipper, in the long run, pays for the waste. We may have a pooling law or not: the economic saving produced by monopoly is a strong enough incentive to bring about monopoly, law or no law. Whether it will be a private monopoly or a Government monopoly remains to be seen.



THE RAILROADS OF THE UNITED STATES SHOWING THE

EAT GROUPS OF ROADS EACH CONTROLLED BY A SINGLE INTEREST

THE SUCCESSFUL PREVENTION OF STRIKES

SEVEN YEARS OF COMPULSORY ARBITRATION IN NEW ZEALAND —THE ADOPTION OF THE LAW IN NEIGHBORING COLONIES

BY

HUGH H. LUSK

FORMERLY A MEMBER OF THE NEW ZEALAND PARLIAMENT

THE natural fate of the pioneers of new ideas is to meet opposition and criticism. It has been the good fortune ew Zealand, the youngest of Britain's overning colonies, to make practical trial ood many experiments in social reform i people elsewhere have been contented lk about, and these reforms have of e invited criticism. For intentional misentation, or even for prejudice, there is medy, but for the mistakes of ignorance are a corrective.

ne of the New Zealand experiments has l forth so much criticism as the Comry Arbitration Law. The reason is ob: it deals with conditions that prevail in creasing degree in all the most civilized ries, and it deals with them in a way i had been looked upon as impossible. ng all the proposals discussed as remedies ndustrial disputes in England and in ica, or even in Australia, none has at time been so generally treated as uny of serious consideration as that which red anything in the nature of compulsion. times the idea was summarily dismissed -English or un-American, but it was even often laughed at as impracticable; it was fore considered all the more absurd and countable that a community of free and overned people of the Anglo-Saxon race d deliberately enter on so wild an experi. Nor was it left to the experienced leaders, manufacturers, and savants of pe and America to condemn the rashness ew Zealand; the new legislation had no severe critics than the press and people e neighboring colonies on the Australian nent. They, too, as well as their New nd neighbors, had plenty of labor troubles, but they congratulated themselves that they were not in danger of flying to wild schemes to meet them.

It was under these somewhat discouraging conditions that New Zealand entered upon her experiment in industrial peace-making seven years ago. The people of the island colony were not themselves very much in love with the new experiment in legislation, though with characteristic enterprise they had determined to give it a trial. Abundant warnings had been given them of the ill effects they might look for, but it was not the first time that they had received equally well-meant warnings that had led to nothing. They had been told in the first place that the thing must fail because people need not come within the provisions of the statute unless they chose to register as a union, and they would not be foolish enough to do that. They had been assured that even if the Act were put into operation it would be found quite unworkable, because neither masters nor workmen would ever submit to an award of the court unless it were favorable to themselves. And last, and most disquieting of all, they had been solemnly warned by leading financial authorities at home and abroad that one inevitable consequence of the rash experiment must be the destruction of the credit of the country as a field for the investment of capital, and the consequent speedy collapse of all its young and promising industries. In spite of all this, though not without misgivings, the people of New Zealand went on.

New Zealand was not a great manufacturing country in 1894, nor is it a great centre of manufactures now. Its population amounted then to about 740,000, of whom nearly 40,000 were aboriginal natives, and by far the

greater part of its industries were directly connected with the land. Of the whole population only about 24,500 were engaged in factories or workshops, and although they supplied to a very great extent the ordinary needs of the colonists they manufactured but little for export. A great deal was exported even then, it is true, for the country is rich in minerals and of remarkable fertility, but little was manufactured and slight progress had been made for several years in this direction. Indeed, the exports for 1893 were valued at nearly four millions of dollars less than those of the year before. It was evident that the country could ill afford to make matters worse.

It is needless to recall the steps by which the prophecy that the Arbitration Act would fail to operate at all was falsified. For the first few months, indeed, but no longer, there did seem to be a chance of failure; but from the day on which the first court sat to hear a case it became certain that suitors would not be wanting. The complaint of the opponents of the system today is not that nobody will submit labor disputes to a court for settlement but that everybody is ready to appeal to it.

The second prophecy of failure, that nobody would submit to the judgments of the Arbitration Court unless it favored themselves, has fared no better. There have been many cases in which the workmen gained their point, or at any rate much of what they contended for. Indeed in a majority of cases, especially during the first four years of the law's operation, this was so. There have been many other cases, especially during the last two years, in which the court has upheld the view of the employers, and in no case whatever has the court been compelled to exert its full powers to enforce entire obedience to its award. The contemptuous assertion, so often made as an unanswerable argument against the system, that you cannot imprison twenty thousand men who may defy the court, has not been tested, because nobody has been foolish enough to defy the court, which is manifestly acting to the best of its ability in the interests of all.

As far, therefore, as the two first objections made to the New Zealand Arbitration Law are concerned the verdict of experience has been decisive. In the country of its birth, at any rate, so far from being contemptuously rejected, the complaint now is that it is only too eagerly appealed to: so far from its judgments being a source of lawless strife, owing to their rejection by the unsuccessful party, they have been invariably accepted, and have practically put an end to violent industrial disputes.

But what of the third and most threatening evil prophecy of all? What has been the effect on the industry, the credit and the general prosperity of the country? Fortunately the evidence is plain and undeniable. The third prophecy of evil has been at least as fully contradicted by seven years' experience as either of the others. When the Compulsory Arbitration Law was passed the people were fairly prosperous, but their prosperity was not progressive. Their exports were large in comparison with their numbers, but they were not quite so large as they had been; their manufacturing enterprises were healthy, but they gavc employment to scarcely any more people than three or even six years before. New Zealand was looked upon then by her Australian neighbors as a country distinctly less prosperous than at least three of the colonies of Australia. It may be only, as a few critics would have us believe, a coincidence, but at least it is a fact that during the last seven years—the years of the operation of the law—all this has been changed. The change was not a sudden one, but it was uniform, and so far there has been no relapse.

In 1895 the value of the exports of New Zealand, the result of the people's industry, amounted to barely $60 for each person of European race; last year it amounted to fully $82. In 1895 there were less than 30,000 persons employed in factories and workshops of all kinds; last year there were more than 58,000. And this is not all. This rapid increase of the exports of the colony, which, compared with the population, has not been equaled by any other country, has gone to increase the wealth not of a small class but of the people at large. Not a few capitalists, but the mass of the population have reaped the benefit of the new prosperity. In 1894 about 150,000 persons—or one in four and a half of the population—had money in savings banks amounting in all to fully $20,000,000; last year nearly 240,000 persons—or one in less than each three and a half of the population—had savings in the banks amounting to fully $35,000,000. That is to say, within six

years the number of additional people who had been able to put aside money in this single direction amounted to one out of every eight in the country and the total sum to an addition of seventy-five per cent. on the whole amount. I could easily show that this remarkable increase of wealth and of widespread prosperity has extended to everything, and in an increasing degree, as the period went on.

One thing, however, should not be forgotten, for it accounts for the attempts persistently made to discredit this social and economic experiment: it is that in New Zealand the well-being of the people—the mass of the people—and not of the capitalist class is considered. The mere increase of trade or the mere influx of money into the country is not looked on there as of necessity any advantage at all. The question which seems of far greater importance to the great majority of the inhabitants is: Does it benefit the people at large? There are, and it is likely there always will be, in New Zealand as well as in America persons who think the inflated millions of a steel or an oil magnate a far more desirable result of civilization than the modest but generally distributed wealth of a whole people. It is no wonder that such persons can find nothing good, and weary themselves in the constant effort to find possible evils which must soon arise to condemn the experiment as a failure which so far has had so painful a resemblance to a success. Unfortunately for such people the world and its ideas are progressive. It is, of course, still possible to write a book intended to show that New Zealand and its experiments are failures, and it is not difficult to get letters written from Australia, or even from New Zealand itself, to the same effect. But truth can always afford to wait, for the future is its own.

Already there are not wanting signs that the seven years' experiment of New Zealand has not been made in vain, even in the interests of the rest of the world. One of these signs is the increasing number of the attempts now being made to discredit the colony and its conditions on the testimony of unknown persons. Another, and a more satisfactory one, is the testimony, both direct and indirect, of those in the best position to form a judgment. It is interesting to know that, while the people of America are being assured that the New Zealand Arbitration Law has proved a failure, the very same law with little more than verbal amendments has lately been adopted by three out of the six State Parliaments of Australia, and has probably become a law by this time also in New South Wales, the most populous and wealthiest of the group. Six months ago, before proposing the new law to Parliament, the executive sent one of the ablest judges on the New South Wales bench as commissioner to report on the working of the law in New Zealand. In his report laid before Parliament he sums up the results of the seven years' experiment in the following words:

"The Act has prevented strikes of any magnitude and has, on the whole, brought about a better relation between employers and employees than would exist if there were no Act. It has enabled the increase of wages and the other conditions favorable to the workers which, under the favorable circumstances of the colony they were entitled to, to be settled without that friction and bitterness of feeling which otherwise might have existed. It has enabled employers for a time at least to know with certainty the conditions of production, and therefore to make contracts with the knowledge that they would be able to fulfil them; and indirectly it has tended to a more harmonious feeling among the people generally, which must have worked for the weal of the colony. A very large majority of the employers of labor whom I interviewed are in favor of the principle of the Act. The awards generally have been in favor of the workers, and it is therefore easy to understand that the unionists to a man believe in the Act, and the non-unionists, so far as my observation goes, find no fault with it."

Such, then, is the seven years' record of this great social and economic experiment. It has substituted peace and good feeling for industrial war and bitterness; it has converted a large majority of its bitterest opponents into supporters; it has steadily, and with amazing rapidity, increased the production of the colony and the wealth of all classes of its people; and, finally, it has so impressed the people of the countries nearest to it, and best able to judge of its effect, that they are one by one adopting its provisions for themselves. Such is the record. Of how many legislative experiments yet tried for the benefit of society can as much as this be said?

MARCONI'S TRIUMPH

AFTER MANY YEARS OF HARD EXPERIMENT — HOW THE SYSTEM HAS DEVELOPED AND THE PROMISE OF ITS IMMEDIATE FUTURE

BY

GEORGE ILES

A RED letter day in electrical history was December 12, 1901. On that memorable Thursday Marconi received by wireless transmission at Signal Hill, Newfoundland, from Poldhu on the Cornish coast, 1800 miles away, the three simple pulses which signify "s" in the Morse code. Before that achievement the great inventor had spanned a space of but 200 miles or so; at a bound he multiplied by nine the distance across which a wireless signal made itself heard. Let him exceed himself once more in a like ratio and he will compass the earth with a message, let sender and receiver be as far apart as they please. The longest distance between any two places on earth is half the circumference of the globe, or 12,450 miles, only sevenfold the space dividing Cornwall from Newfoundland.

To those of us unfamiliar with electrical apparatus there is something incomprehensible in the feat of Marconi, because we are accustomed to reckon solely with such electric streams as take their way along wires. But there are a great many other electric streams, unconfined by wires, which can be quite as telegraphic as if they kept to paths of copper or steel. As long ago as 1842 Prof. Joseph Henry, at Albany, N. Y., noticed that an induction coil, emitting sparks an inch long, induced currents in wires stretched in his cellar, although there was no intervening wire, and two thick floors and two rooms stood between. Waves from just such a coil are those today used by Marconi; they were proved by Hertz to travel with the speed of light and to differ from light-waves only in being longer and therefore invisible. But, although the eye is blind to these ethereal vibrations, they fall upon a simple device with immediate and perceptible effect.

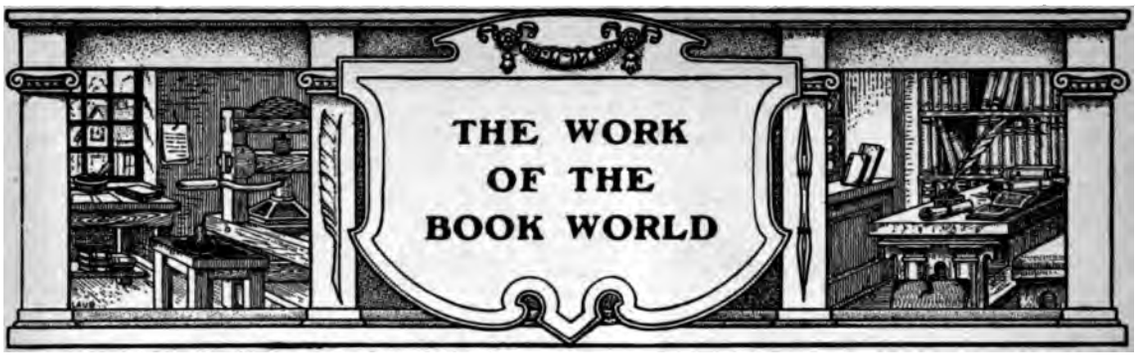
The pivot of wireless telegraphy is the "coherer," unexampled for its exquisite responsiveness in the whole range of electrical apparatus. It consists of a tiny glass tube at each end of which a wire enters; in the centre of the tube the terminals of these wires, almost in contact, are separated by a minute pinch of nickel and silver filings, to which a trace of mercury is added. The tube is exhausted of air so that its contents may not corrode. Under ordinary circumstances the filings are jumbled together as chaotically as the particles of a sand heap, and in that state they form a non-conductor. But let them receive from afar an electrical wave from an induction coil, and instantly they cling together so tightly as to become a solid conducting bridge that carries a current from a local battery to a receiving telephone, or to a telegraphic sounder of common pattern. This done, a self-acting shaker in a moment restores the filings to their original state of non-conducting chaos, when a second signal arrives and so on to the end of a despatch. In effect a coherer is an electric eye as sensitive to a feeble electric ray as the human retina to a glimmer of light from a distant tower; the unique advantage of the coherer is that the waves to which it responds may be a hundred or a thousand miles in their circuit, and as they go may conform to the curvature of the earth instead of pursuing, as light does, a line rigidly straight and of limited availability. The coherer in its perfected form is due to many inventors, the chief of them being Professor Onesti, of Fermo in Italy, Prof. O. J. Lodge, of Birmingham, and Prof. E. Branly, of Paris. A device much simpler and as essential to space telegraphy is due to Marconi himself. This is the vertical wire which he suspends in the open air, and which serves as a lightning catcher for his messages. For telegraphy, in his early experiments, across one mile this wire was twenty feet long, for four miles forty

feet, and so on, the telegraphic distance increasing as the square of the height of the wire. In his latest experiments these heights of wire have been much reduced.

Thus far the successes of Marconi have been in traversing unbroken and unshared stretches of lakes, bays and seas. Here, fortunately, the instruments work better in bad weather than in good, so that they are most useful just when they are most needed. Because up to the present time every Marconi message has usually had a clear field to itself, little or no confusion has arisen between one despatch and another. New difficulties would attend the sending forth of hundreds or thousands of messages across the same space at the same moment. It would be much as if a thousand musicians within earshot of each other were every man playing a tune of his own; how would a listener be able to pick out the notes of a particular violin or trombone? This is the supreme obstacle which confronts Marconi and the other inventors who seek to assure and broaden the scope of wireless telegraphy. Professor Lodge has contrived an apparatus which attunes a sending instrument and its receiver in such wise that waves from one arouse a response solely in the other. How far such pairs of instruments may be diversified in actual practice, whether by scores, by hundreds, or by thousands, is a question which only experience can determine. A task already accomplished for unattuned messages is the production of apparatus so strong and simple as to stand the stress of rough and ready manipulation aboard ship. One thing is positive: inventors of the utmost resource and audacity are resolved to give wireless telegraphy the widest possible field and the highest possible trustworthiness; already the victories of these men are so astonishing that their further attacks may any morning become triumphs assured.

Marconi himself, modest and sensible man that he is, takes a conservative view of his work. He smiles at the bristling fur and panic of the cable companies; it is a very different sphere from theirs that he is likely to create and culivate. Let his system be limited to but one hundred miles, and within that radius it will develop inestimable services. On shipboard a word from shore or from another ship will give warning of a neighboring reef or an ice floe, or tell of a dangerous change in an ocean current, or herald a coming tempest. Steamer may communicate with steamer throughout the whole course of an ocean lane, forfending all risk of collision, keeping the while every member of the fleet in constant touch with land. The approach of vessel to vessel, so long a source of danger in thick weather, now becomes desirable for receiving news, as ensuring safety. In case of disaster aid may be summoned without delay. It is little wonder that Lloyds, the chief marine insurers of the world, have contracted recently for fourteen years' use of the Marconi patents.

The first telegraphic cables to be displaced by Marconi are likely to be short lines, such as those which join a lightship or a lighthouse with land. Cables of this kind are liable to be parted by dragging anchors, or to be chafed to pieces on rocky coasts. The Marconi method has similar applicability to groups of islands, such as those of Hawaii and the West Indies, where the business to be transacted falls within the pace of a wireless system, fifteen words per minute. Whether Marconi will ever compete with the long cables of the deep seas is doubted by electricians of judicious mind. These lines are likely soon to be almost doubled in their capacity by Professor Pupin's introduction of choke coils at each eighth of a mile. As they stand at this hour the Atlantic cables convey sixty words per minute as against one-fourth as many by the wireless system across spaces of not more than 200 miles. On land, in towns and cities, with their multitudinous and powerful currents for motors, lamps and chemistry, the delicate pulses of a Marconi transmitter are overborne and drowned as a whisper might be amid the thunders of a boiler shop. Ingenuity may never devise a selector which under such circumstances will separate for an ear the message meant for that ear and no other. And yet, making every reasonable qualification at this early stage of experiment, the triumph of Marconi remains one of the most remarkable and fruitful that have ever crowned the insight, patience and courage of mankind. A Boston firm already manufactures a wireless telegraph easy to install and operate; it forms part of the physical apparatus in many schools of the United States.



MR. RIIS'S "THE MAKING OF AN AMERICAN"

WHEN Governor Roosevelt wrote of Mr. Jacob A. Riis as the most useful citizen of New York he wrote in the language of personal friendship; but who shall say that he wrote with exaggeration? For it has now become a commonplace in the recent history of New York City that the impulse to improve the condition of the poor was set going in us all more by Mr. Riis than any other man.

This large human fact (for Mr. Riis is a large human personality) makes his autobiography one of the most interesting "human documents" of recent literature. It followed Mr. Washington's "Up from Slavery" through the pages of *The Outlook*, and was a worthy companion-piece.

Mr. Riis, a Dane by birth, came to New York in his boyhood. After he "found himself" he took up the work of a reporter; and the active part of his career was as the chief police reporter for the New York *Evening Sun*. His office was near the Police Headquarters in what was once the most wretched part of the city. In writing the daily stories of crime and poverty, directly out of human life, he developed an idiomatic style of English that is as direct as a blow and as effective. The earnestness of the man and his boundless sympathy give it a human quality that is irresistible.

But Mr. Riis did not regard himself as a writer so much as a worker. He would follow the fortunes of a victim of the slums till he gave the poor creature practical help. He would follow corrupt or careless police officials till they did their duty. He would follow a programme for reform till the "three-decker" tenement house practically disappeared, and Mulberry Bend of all places in the world became of all things in the world a public park. Light and air and room and decent conditions of life—he has done more than any other man to bring these things to the forgotten masses of the great city.

In telling the story of his life and work, Mr. Riis has, characteristically, regarded himself as a human being—not as a "type," nor as a "reformer"; and the story is not a self-conscious narrative but a narrative of how he enjoyed himself in working for the betterment of slum life. There is not a more wholesome book in recent literature nor many that are so interesting. (Macmillan. $2 net.)

A SHORT GUIDE TO NEW BOOKS

HISTORICAL STUDIES.

MR. JOHN BEATTIE CROZIER has devoted his ripest years so sedulously to study and thought that Volume III of his "History of Intellectual Development on the Lines of Modern Evolution" (Longmans. $3.50),—even without the deferred second volume—abundantly fulfills the promise of Volume I. With a breadth of view that leaves no human institution unconsidered, but with lucidity of exposition and felicity of illustration, he reviews the social, educational, and political movements that culminated in the modern world, unfolds the significance of the nineteenth century, and foreshadows what the twentieth will probably bring. In Part I he argues convincingly that statesmen should draw their precepts from the history of civilization, and points out the importance of these essential principles: that advance should be made, not by

A History of Intellectual Development

blindly seeking ideals, but by gradually modifying existing institutions; that society should be kept homogeneous, with free passage up and down and to and fro for individuals; and that material things and actual conditions, not the character of a people, should be the care of legislators. In Part II he applies his generalizations to England, France and the United States, suggesting directions for future statesmanship. To an American the book is a lightning flash of inspiration; to thinkers of any race it must appeal as an illuminating philosophical message. One difficulty with "The French People" by Mr. ARTHUR HASSALL (Appleton. $1.50) is that it does not follow systematically Mr. Crozier's plan of pointing out general principles, rather than narrating political facts; and thus Mr. Hassall emphasizes the French monarchy and loses somewhat the significance of the "People" in his title. Yet with impartiality and con derable mastery of his subject, he relates very capably the story of France from the fall of the Western Empire until to-day, adding an unexpected final chapter on French foreign policy. Perhaps the best chapter is that on the reign of Louis XIV, to whom Macaulay was so unfair. In a volume of more special interest Captain ALFRED T. MAHAN, who now worthily enjoys the distinction of being the President of the American Historical Society, has put into "Types of Naval Officers" (Little, Brown. $2.50 net) eight essays (some of which appeared in *The Atlantic Monthly*) on different English naval heroes—"Hawke: The Spirit"; "Rodney: The Form"; "Howe: The General Officer as Tactician": "Jervis: The General Officer as Disciplinarian and Strategist"; "Saumarez: The Fleet Officer and Division Commander"; and "Pellew: The Frigate Captain and Partisan Officer." Prefixed to these stories of type is an essay on "Conditions of Naval Warfare at the Beginning of the Eighteenth Century." The collection has a double interest—the interest of biography and the interest of naval history. Perhaps till the crack of our national doom our historians will quarrel about John Smith—whether he were a veracious adventurer or an adventurer with unduly developed imaginative powers. It is interesting to recall that Mr. John Fiske was disposed to take him at his word. So in the main does Miss KATHARINE PEARSON WOODS. She has made a very thorough and sympathetic study of the original sources; and her story of the life of Smith, "The True Story of Captain John Smith" (Doubleday, Page. $1.50), leaves him in the reader's mind as our greatest explorer and as a man of the most wonderful adventurous qualities that ever got abroad in the world. The book is a serious and careful historical piece of work, but it is also an interesting narrative: it was written to be read, as many historical works, alas! are not; and it is both easy and exciting to read. A less spirited narrative, Mr. L. L. PRICE'S "Short History of English Commerce and Industry" (Longmans. $1.25 net), gives no detailed information regarding any one institution, nor does it cover the developments since the adoption of Free Trade, but as a general sketch of the industrial growth of England to the middle of the nineteenth century, it possesses the merits of compactness, clearness, and excellent arrangement. It is academic and elementary—palpably a course of college lectures. A volume of a different type is "Great Epochs in Art History" (Houghton, Mifflin. $1.75 net), by Professor JAMES M. HOPPIN, late of Yale. Professor Hoppin reviews appreciatively the advance of Italian religious painting, French Gothic architecture, and Pre-Raphaelitism, and contributes also an essay on Skopas, whom he calls the Rodin of Greek sculpture. The book is pleasantly instructive. Though discursive and not particularly searching, it possesses value as a summary of three important artistic movements, with enough individual criticism to give it vitality. Professor BURGESS'S volumes, "The Civil War and the Constitution" (Macmillan. $2.00), outlining the events of the war, present especially the questions of constitutionality which were brought forward, and give a human account of the leading personages of the struggle. The late GENERAL MICHIE'S "General McClellan" (Appleton. $1.00) also gives a clear description of the early portion of the war, and sets forth in an altogether fair-minded way many things in McClellan's career which have been much in dispute. Coming down to the Spanish-American War GENERAL ALGER'S history, (Harper. $2.00) is a fairly convincing defence of the War Department's administration of army affairs. The book fails to justify itself as an entirely trustworthy contribution to history because of the evident personal bias shown in some of the matters discussed.

The French People

Types of Naval Officers

The True Story of Captain John Smith

Short History of English Commerce and Industry

Great Epochs in Art History

The Civil War and the Constitution

General McClellan

The Spanish American War

RECENT NOVELS.

If the series of American novels published by the Harpers last year produced no memorable book, it has produced three that are clever, Mr. Pier's, Mr. Gilson's and Mr. Colton's. "The Sentimentalists" by Mr. Pier has already been discussed. Mr. ROY ROLFE GILSON in "When Love Is Young"

When Love Is Young

(Harper. $1.50) follows his hero, Robert Dale, though various episodes of boyish love from his kindergarten days until he marries. The book is unique as a complete history of the many "affairs" of the average sentimental American youngster. It is at times pathetic but more often delicately humorous, with animated dialogue and salient episodes—a hopeful beginning for a novelist's career. Mr. ARTHUR COLTON in "The Debatable Land" (Harper. $1.50) not only pictures life in a quiet New England valley suggestively, but he puts his hero and his heroine through the fiery bath of the Civil War where, he as a spy and she as a nurse, they learn their common destiny. Gard Windham, foundling, musician, army officer, wins his Connecticut Helen despite the unscrupulous rivalry of the domineering Morgan Map. Mr. Colton makes phrases after the manner of Mr. Henry James. He has learned something, moreover, from "The Red Badge of Courage" as Mr. Gilson has from Stephen Crane's stories of children. Mr. ALFRED HODDER in his first book, "The New Americans" (Macmillan. $1.50) proves himself another apostle of brilliancy. The people of his novel of modern life all talk with the same adroit smartness and live apparently with little sympathy and hardly greater morality. One lays aside the carefully wrought book with a hungering for sunshine and good air. No little of this can be found in the summer atmosphere of "Mistress Joy" (Century. $1.50), a delightful little romance by two Southern writers, Mrs. GRACE MACGOWAN COOK and Miss ANNIE BOOTH MCKINNEY. The scene is laid in Natchez in 1798, and Aaron Burr is a leading character. Mistress Joy is wooed by a disguised English nobleman who proves unworthy of her, but she marries quite the right man at the end. "Floodtide" by Mrs SARAH P. MCLEAN GREENE (Harper. $1.50) is another cheerful book, an interesting study of life in a Maine coast village. It has humor; and the sketch of the boy, Dinsmore, and of his mother is full of the human element in one of its most appealing phases. Although good proportion is lacking, the story breezily portrays the wholesome life of wholesome people. Mrs. ELLEN OLNEY KIRK, on the other hand in, "Our Lady of Vanity" (Houghton, Mifflin. $1.50) studies society, the world, the flesh, and the devil in the story of Joan Milbank's successful plotting to win her younger sister's lover for his fortune. Ultimately Joan yields to an old infatuation. On the whole the picture is not engaging, though the manner of telling is skilful. Three other writers find themes on American soil. Mr. B. K. BENSON follows "Who Goes There" with "A Friend With the Countersign" (Macmillan, $1.50). With all the actuality of a diary the book relates the experiences of a Northern spy in the Civil War. Mr. Benson has not fused his material into the vividly imagined drama of a natural story-teller, but with its little-known history and its real war scenes, the tale entertains if it does not thrill. "The Marrow of Tradition" by CHARLES W. CHESTNUTT (Houghton, Mifflin. $1.50) does thrill,—it even harrows. It is a contemporary "Uncle Tom's Cabin," a story of racial hatred in the South. The leader in the Negro persecution finally has to beg a Negro doctor to save his child's life at a moment when the doctor's own child lies dead at the hands of a mob. The book is palpably a tract. If the Negroes were not so blameless and the Whites not so unrelievedly bad, it would be more convincing. Mr. ROBERT BARR in "The Victors," (Stokes. $1.50) tells a story of life in New York—more particularly political life—with some dramatic effectiveness. The whole narrative from the peddling experiences of his heroes in Michigan to the Tammany machinations of his Boss is entertaining melodrama rather than a convincing transcript of life. Stories of eighteenth century England possess charm if they catch the quality of the period. This Sir WALTER BESANT does with some success in the posthumous "Lady of Lynn." (Dodd, Mead. $1.50.) Though the tale of Sam Semple's revenge on Molly Miller, the Lady of Lynn, by snaring her property for his villainous patron, Lord Fylingdale, is absorbing, the conversion of staid old Lynn into a fashionable eighteenth century watering-place is the effective incident. It is all pedestrian story-telling, but it is individual and never dull. In "A Nest of Linnets" (Appleton. $1.50) Mr. FRANKFORT MOORE is less successful than Sir Walter in striking the eighteenth century note, though he tells a pretty story of Sheridan's love for Betsy Linley, introducing such well-known personages as Garrick, Sir Joshua Reynolds, Horace Walpole, the beautiful Mrs. Abington, Peg Woffington and Dr. Johnson. From across the water comes also Mr. STEPHEN GWYNN'S "The Old Knowledge" (Macmillan. $1.50), an engaging little chronicle of an English girl's experiences among the streams and moors of "ould Ireland," where she meets two lovers and manages to remain true to both and to herself. The quaint mysticism of Owen Conroy is very dextrously done. But the strongest and most capably finished of recent British novels is "The House with the Green Shutters," by GEORGE

The Debatable Land

The New Americans

Mistress Joy

Floodtide

Our Lady of Vanity

A Friend With the Countersign

The Marrow of Tradition

The Victors

The Lady of Lynn

A Nest of Linnets

The Old Knowledge

DOUGLAS. (McClure, Phillips. $1.50.) It suggests at once "Wuthering Heights" and "The Mayor of Casterbridge." John Gourlay, grim and dour, foremost man in a little Scotch town, moves inevitably to financial ruin and at last is murdered in the House of the Green Shutters by a weakling son. The book is a novel in the strictest sense, with the old man and his son, sharply etched characters, gradually developing against a distinct background of Scottish life to the two creatures that wrangled in the fatal kitchen at the end. Mr. Douglas reads humanity with a searching eye and writes with certainty of touch. The increasing dissemination of things Russian is emphasized by the recent publication of books by four Russian authors, Merejkowski, Pimenoff-Noble, Orzeszko and Gorky. DIMITRI MEREJKOWSKI presents the first of a trilogy planned to show the conflict between Christianity and Paganism, in later days as well as in the ancient world. "The Death of the Gods" (Putnam. $1.50) follows the career of Julian the Apostate, who in the fourth century sought to revive the Olympian worship. It is full of vivid pictures of ancient customs, is extraordinarily brilliant in its coloring, and combines romantic interest with sound scholarship. The other writers find plots near at hand. PIMENOFF-NOBLE in "Before the Dawn" (Houghton, Mifflin. $1.50) employs the familiar machinery of Russian life, bringing Tanya Lobaniva, a beautiful high-souled woman, through the usual conspiracies—nihilistic, social, financial,—to a happy marriage, beyond the reach of the Bear. Mrs. ELIZA ORZESZKO the Polish author of "The Argonauts (Scribner. $1.50) is called by the translator, Mr. Jeremiah Curtin, "the greatest female writer and thinker in the Slav world today." The story is of a great business genius who gains enormous wealth, but commits suicide at finding his power has cost him all human relationships. Equally sombre in tone is MAXIM GORKY'S "Orloff and His Wife" (Scribner, $1) "tales of the barefoot brigade." The volume gives a further impression of the genius of a writer who is today the most conspicuous among the Russian novelists. Sketches of low life done with grim realism, the stories exhibit a skill in portraiture uncommonly developed.

The House with the Green Shutters

The Death of the Gods

Before the Dawn

The Argonauts

Orloff and His Wife

ESSAYS

DR. LYMAN ABBOTT in his Lowell Institute lectures, published under the title of "The Rights of Man" (Houghton, Mifflin. $1.50 net) lucidly expounds the development of human ideals, showing the gain of democracy in the long conflict between the ideal of the Hebraic commonwealth and the ideal of the Roman Empire. The book is a clarifying restatement of familiar economic facts and theories, applied to contemporary American problems—not profound, but thought compelling and inspiring in its breadth and optimism. Professor HUGO MUNSTERBERG, of Harvard, also dwells on the way the United States is working out its destiny. "American Traits" (Houghton, Mifflin. $1.60 net) is an analysis of American democracy by a sharp-eyed German living among us, who thinks that the adoption of some German ideals might increase our national efficiency. It is the sincere effort of a man of foreign rearing to remove our misunderstanding of his own native country—thoughtful, individual, suggestive. The affinity, however, that Professor Münsterberg discovers between the Germans and the Americans does not mean the Teutonizing of the United States, for the English and the Japanese are also discovering an affinity. It hints at something far different. Closer to the immediate concerns of everyday life is "School, College, and Character," (Houghton, Mifflin, $1 net) by Professor L. B. R. BRIGGS, Dean of Harvard College. With the soundest good sense and with frequent humorous flashes, Dean Briggs takes students and parents into his confidence, and shows them the solution of college problems from the point of view, not of the "office," but of a very clear-thinking, whole-souled man in the "office." The nervous idiomatic style of the book is delightful; the pithy admonition full of a ripe wisdom. In its terse simplicity the little volume is in contrast with "Parts of Speech" (Scribner. $1.25 net), a collection of essays on English by Professor BRANDER MATTHEWS. In Professor Matthews's essays, ranging from a historical sketch of the English language to a spirited plea for reformed spelling, laymen, rather than students of the language, will find some pleasant instruction, spiced with many concrete illustrations; and spelling reformers will be comforted by the twelfth and thirteenth papers. Larger themes are discussed by the Rev. MINOT J. SAVAGE in "The Passing and the Permanent in Religion" (Putnam. $1.35 net). Dr. Savage sifts the essentials of religion through scientific, historical, and critical study, and yet leaves an inspiring, elevating residuum. However "unorthodox" he may be, frankness and sincerity speak from every page of his book. The Putnam's, moreover, have put his excellent sermons into a very luxurious volume. M. Charles Wagner's earnest and well-known moral essays, collected as "The Simple Life" (McClure,

The Rights of Man

American Traits

School, College, and Character

Parts of Speech

The Passing and the Permanent in Religion

Phillips. $1.25), well translated from the French by MARY LOUISE HAIDEE, present a refreshingly new ideal to those who weary of the struggle for possessing things. Mr. AUGUSTINE BIRRELL is a less "elemental" thinker, but a robust essayist and entertaining always. In his "Essays and Addresses" (Scribner. $1 net), he talks of such various subjects as "The House of Commons," "Walter Bagehot," "The Ideal University," "Robert Browning," and "John Wesley," with the cultivated charm of a man of wide experience, giving a humorous twist even to serious themes.

The Simple Life

Essays and Addresses

TRAVEL.

Mr. JAMES CREELMAN in his capacity of newspaper correspondent has reported most of the stirring events of the last decade and has met the world's great characters under exceptional circumstances. "On the Great Highway" (Lothrop. $1.50) is a narrative full of life and action in which these adventures and meetings are vividly described. Mr. RAY STANNARD BAKER'S experiences related in "Seen in Germany" (McClure, Phillips. $2.00 net) are less stirring, but his chapters on such subjects as "The Kaiser," "The German Soldier," "The German Workingman," "Shipbuilding," and "Student Life" are entertaining, well illustrated, and full of things one wishes to know about a foreign land. A similar book is Mr. CLIFTON JOHNSON'S, "The Isle of the Shamrock." (Macmillan. $2.00 net), the record of a casual tourist's impressions of Ireland. To the innumerable attempts at portraying the diverting and picturesque aspects of the student quarter of Paris is added "The Real Latin Quarter" by F. BERKELY SMITH (Funk & Wagnalls. $1.50), a gay, bright book, full of graphic touches and entertaining episodes.

On the Great Highway

Seen in Germany

The Isle of the Shamrock

The Real Latin Quarter

THE MONTH'S MOST POPULAR BOOKS

REPORTS from booksellers in Louisville, Boston, St. Louis, Philadelphia, Kansas City, Dallas, Cincinnati, Rochester, Pittsburg, St. Paul, and Toronto, and from librarians in San Francisco, Jersey City, Bridgeport, Hartford, Springfield, Detroit, Cincinnati, Buffalo, Los Angeles, Cleveland, Chicago, and Minneapolis, combine into the following lists showing the relative demands for books at stores and libraries for the month ending January 1st.

BOOK-DEALERS' REPORTS

1. The Right of Way—Parker. (Harper.)
2. The Ruling Passion—Van Dyke. (Scribner.)
3. The Cavalier—Cable. (Scribner.)
4. Lazarre—Catherwood. (Bowen-Merrill.)
5. The Man from Glengarry—Connor. (Revell.)
6. The Crisis—Churchill. (Macmillan.)
7. Lives of the Hunted—Seton. (Scribner.)
8. Marietta—Crawford. (Macmillan.)
9. Kim—Kipling. (Doubleday, Page.)
10. D'ri and I—Bacheller. (Lothrop.)
11. Cardigan—Chambers. (Harper.)
12. Circumstance—Mitchell. (Century.)
13. The Benefactress—Anon. (Macmillan.)
14. Graustark—McCutcheon. (Stone.)
15. Count Hannibal—Weyman. (Longmans.)
16. The Eternal City—Caine. (Appleton.)
17. Amos Judd—Mitchell. (Scribner.)
18. The Making of an American—Riis. (Macmillan.)
19. The Portion of Labor—Wilkins. (Harper.)
20. Blennerhassett—Pidgin. (Clark.)
21. The Velvet Glove—Merriman. (Dodd, Mead.)
22. Up From Slavery—Washington. (Doubleday, Page.)
23. The Life of R. L. Stevenson—Balfour. (Scribner.)
24. The History of Sir Richard Calmady — Malet. (Dodd, Mead.)
25. Tristram of Blent—Hope. (McClure, Phillips.)
26. Wild Animals I Have Known—Seton. (Scribner.)
27. A Lily of France—Mason. (Rowland & Griffiths.)
28. In the Fog—Davis. (Russell.)
29. The Tory Lover—Jewett. (Houghton, Mifflin.)
30. Farm Rhymes—Riley. (Bowen-Merrill.)

LIBRARIANS' REPORTS

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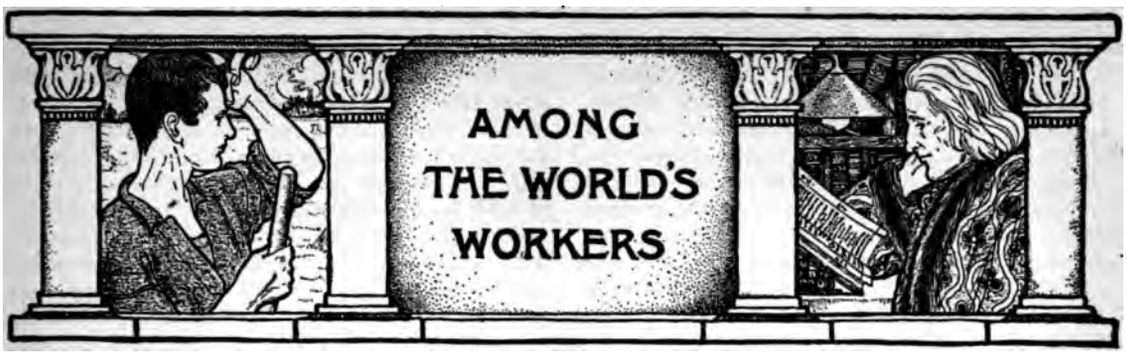
11. Cardigan—Chambers. (Harper.)
12. The Ruling Passion—Van Dyke. (Scribner.)
13. Life Everlasting—Fiske. (Houghton, Mifflin.)
14. The Benefactress—Anon. (Macmillan.)
15. Blennerhassett—Pidgin. (Clark.)
16. Up from Slavery—Washington. (Doubleday, Page.)
17. Circumstance—Mitchell. (Century.)
18. The Helmet of Navarre—Runkle. (Century.)
19. The Tribulations of a Princess—Anon. (Harper.)
20. A Sailor's Log—Evans. (Appleton.)
21. The Puppet Crown—McGrath. (Bowen-Merrill.)
22. The Tory Lover—Jewett. (Houghton Mifflin.)
23. Alice of Old Vincennes—Thompson. (Bowen-Merrill.)
24. Tristram of Blent—Hope. (McClure, Phillips.)
25. The Making of a Marchioness—Burnett. (Stokes.)
26. Truth Dexter—McCall. (Little, Brown.)
27. The Life of R. L. Stevenson—Balfour. (Scribner.)
28. Marietta—Crawford. (Macmillan.)
29. J. Devlin: Boss—Williams. (Lothrop.)
30. Tarry Thou Till I Come—Croly. (Funk & Wagnalls.)



THREE REMARKABLE DISCOVERIES

THREE remarkable discoveries have recently been made in the world of science, any one of which may in time alter materially the conditions of our daily life. That one, the effects of which may be more immediately felt, is the vacuum tube lamp, invented by Peter Cooper Hewitt, son of Abram S. Hewitt. The distinctive feature of this lamp is that it may be operated by a continuous electric current such as is now used to light the ordinary incandescent lamp. Tube lamps have, of course, been operated before, notably by Tesla, but the animating power was always the alternating current which involves the dangerous use of many thousands of volts. They contain a more or less impalpable gas, the resistance of which always opposed the passage of a low-volt current. It is, in fact, the endeavor of the current to overcome the resistance of the gas which causes such a tube to glow. Mr. Hewitt, in the course of his experiments, found that if he first caused a spark from an induction coil to be passed through the tube, it had the effect of breaking down the resistance, reducing it so much in fact that an ordinary Edison lamp current would operate the tube. The gas in the tube then acts precisely like the carbon filament of a bulb lamp. It glows, but with an incandescence eight times as luminous, power for power, as an Edison lamp. Since, therefore, there is no auxiliary machinery necessary to the use of the lamp, the latter becomes a marketable product immediately adaptable to present conditions.

It has been contended that the absence of red rays from the light of the tube lamp would debar it from practical use. Mr. Hewitt hopes to overcome the objection by experiment. The same objection was overcome in both the Welsbach and the Edison lamps before they became widely marketable.

Professor William Hallock, of Columbia College, has discovered a way to make visible the rays emitted from certain products of pitchblende. This is in the line of progress toward the ultimate production of light without heat. There is a theory that all objects emit rays, more or less palpable, and the French scientists have been very active in experimens, especially in certain extracts of pitchblende. These rays are in all cases powerful enough to affect photographic plates, but heretofore they have remained invisible. The X-rays were invisible until Edison invented the fluoroscope and rendered them visible to the eye. Professor Hallock has combined the substances emitting rays with a certain material—with the result that the rays become visible. The light, as yet, is small. The waste from the uranium by the projection of these rays is so infinitely small—a fraction of a grain being lost in a million years—that to all intents and purposes the light is perpetual.

The third discovery goes to prove that nerve force in the human body is entirely an electric process. Professor Jacques Loeb and Dr. Albert T. Matthews, of the University of Chicago, found in a remarkable series of experiments that a nerve is a gelatinous solution, the atoms of which contain minute charges of electricity. The charge may be negative or positive. The negative charge is the stimulating charge; the positive has the opposite or deadening effect. The atoms communicate their charges one to another, and thus a current of nerve force is set up. The contractibility of muscles is explained in the same manner. When a muscle is stimulated the gelatinous solution is precipitated, and this fact furnishes an explanation for anæsthesia. Anæsthetics, when taken into the lungs find their way to the brain, and, acting on the brain cells, dissolve the colloids with which they come in contact. A positive charge along a nerve will do the same thing, and as long as the condition exists no sensation can pass along the nerve. The experimenters are continuing their investigations with a view to determining the true nature of death, which they think is not a cessation of action, but a morphological process. In their experiments on sea urchin's eggs they have indefinitely postponed death by means of potassium cyanide solutions. Together these three new developments, with the practical success of wireless telegraphy, form a new chapter in our later scientific history.

FURNISHING POWER FOR THE WORLD

NOT a decade ago it was frequently pointed out that in the coming age of steam and electrical power the country with the greatest coal supply would dominate the activities of the world. Great Britain at the time produced the greatest amount: its industrial supremacy was unquestioned. But in 1899, the year in which the United States first led the world in exports, the rate of increase in our coal production had shot it ahead of Britain's: since then the increase has been twice as fast as Britain's; and now we are so many millions of tons a year ahead, with the volume of output growing by leaps and bounds, that the American industries dependent on coal are impregnably fortified: "Eclipse is first, the rest nowhere." Withal our vast coal beds are hardly more than scratched, while those of the United Kingdom are rapidly reaching unprofitable depths and those of Germany and the Netherlands are still nearer exhaustion. The rest of the world together does not equal half our output. Already the prophecies of ten years ago are fulfilled: as our coal production has increased we have forged ahead industrially. Of the 260,000,000 short tons secured from the mines in 1900 only four per cent. was exported; the rest was devoted to increasing the comfort and the efficiency of the people. The future will show an advance rather than a retrogression, with a resultant increase in exports.

Already the world is seeking our coal. Recently a Belgian coal merchant came all the way to America to arrange for consignments, and in France a project is on foot to establish at one of the northern ports a coal depot fitted with American appliances to handle American coal. A French railroad helps the movement by offering special low freight rates for transporting the coal to Switzerland. Consul-General Skinner, at Marseilles, says that American coal is no longer an experiment in Southern France, and the present strike of the French coal-miners serves to increase the demand as does the recent halving of the freight rate from Newport News to Marseilles. Up to 1900 no American coal had entered Austria-Hungary; in that year seventeen per cent. of the coal imported came from the United States. In Berlin, says Consul Metcalf, American anthracite can undersell Welsh. So it goes throughout Europe: from Norway to Italy and from Spain to Turkey, American coal, despite transportation expenses, has begun, almost within the last six months, to win its way. English exporters of coal to the republics south of us are dreading our inroads there. To Asia and Australia also goes the coal. Our export trade in it seems destined to reach vast proportions. Great Britain's export duty aids us now by removing to some degree the competition of Welsh coal, but once the trade is established and low rates secured for transportation, our output may double its present yearly increase and still find a market.

Our inexhaustible coal beds, however, do not furnish the full explanation either of the production or the disposal of the coal. A glance at the coal at any point from its natural state in the vein to its final delivery will show the real reason why the United States is coal-king. Hand labor will be looked for in vain. Of course the anthracite is got out by manual labor, but soft coal mining has been revolutionized by the use of the under-cutting compressed-air mining machine. A full half of the increase in the output of soft coal last year came from mines using them. In 1897 there were in the country 1,956 machines; last year there were 3,907. Once mined, the coal is piled by automatically dumping cars, removed from the pile by an endless chain of buckets running under it, poured automatically into Monongahela scows or lake-freighters, unloaded, still automatically, into economical steel freight cars, and finally shot into vessels for foreign transportation. Every process is done mechanically and by wholesale. Abroad, coal handling plants are being built by Americans to handle it at the other end as it is handled here. Mr. Brown's plant at Alexandria was described in the last number of THE WORLD'S WORK; there is another more or less like it at Brisbane in Australia; one is to be built in France; and as fast as the export trade in coal becomes established more will follow. What the English save by lower freight rates for their shorter haul, we offset by labor-saving methods and devices; and as the freighting of coal from Pennsylvania to France even now does not cost as much as to Minnesota, freight rates are not such an insurmountable obstacle as they seem.

AN AMERICAN REVOLUTION IN GERMAN MANUFACTURE

IT is a distinctive merit of America that it has recognized more fully the value of machine tools than any other nation, and that its inventors have worked more fruitfully in producing such tools than men of any other age or country. This is only a part of the story; for American machine tools are now being manufactured on a large scale in Germany upon American models and with American machinery; and from Germany they are shipped to many other European countries.

Over thirty years ago an enterprising young German merchant, Ludwig Loewe, was doing a business in iron and ironware on one of the smaller streets of Berlin. It was at the time when the American sewing machine was first making its way into Germany. Loewe saw that it must

necessarily find a large and permanent market here and he determined to undertake its manufacture. He had first to learn how the machine was made, and went to the United States where he saw the work of American machine tools. He saw them cutting the different parts of the sewing machine into shape, and doing their tasks with an accuracy and speed that was astonishing to a man accustomed to see German workmen use the file for similar work. Loewe came back to Berlin with an outfit of American machine tools for his factory, which was established in 1870. It was a great success and wrought an actual revolution in the metal-working trades. The effect of his introduction of American machinery, as stated by a German authority, was to give to the entire industry of that country the means to struggle against English and American competition with distinguished success.

Three years later Loewe enlarged his factory and began to make his own machine tools by copying his American originals. After the war with France the German Government decided to equip the army with new rifles. A contract was awarded Loewe to make the sights for them, and some years later he began the manufacture of the complete rifles. The Loewe concern soon became known throughout Europe as the manufacturer of the famous Mauser gun, and it soon had huge contracts with Germany, Turkey, and several other countries. When the company in 1895 celebrated its twenty-fifth anniversary, it had sold over $31,000,000 worth of rifles and machinery in foreign countries alone. In Germany, many leading establishments had been supplied, in whole or in part, with the company's American machinery. The famous Krupp had become a regular customer.

About the middle of the nineties Loewe's representatives became convinced that a long stride forward must be made in order to meet American competition. It was resolved to build a new factory on a larger scale, and in carrying out this plan the experts of the company were sent upon a tour of observation among the workshops of England and the United States. Later a second trip was made to buy machinery for the great new shop. The outcome of this trip was thus recorded by an English authority: "We regret extremely to state that the result of their investigations was the purchase of but one small machine tool in Great Britain, whilst hundreds of thousands of dollars were spent in America." The foundry of the concern was brought over complete from Connecticut and erected by American workmen. Even the power is in part generated by an engine from Wisconsin.

The new Loewe works, which went into operation about four years ago, have reduced the cost of production twenty-five per cent. as compared with the old concern. When a large number of American mechanical engineers came to Berlin in the summer of 1900 from the Paris exposition as the guests of the Loewe Company, they freely admitted that they had seen in no one American shop so complete an assortment of the most improved American machine tools. The company adopted the American principle of manufacturing standard types, each type having all parts of precisely the same size and shape, so that the machines can be put together at the very shortest notice, and broken parts be supplied immediately. The Loewe company has further adopted the American way of dealing with their workmen. They give their men every encouragement to offer suggestions and make improvements. Thus the American spirit of individuality, the product of our democratic training, follows our machines across the sea.

The Loewe establishment has proved to be a fruitful industrial germ—from it have sprung several other establishments based mainly upon American ideas. About ten years ago the Loewe company, with six large Berlin banks, acquired the Thomson-Houston patents and established at Berlin the Union Electrical Company. The American owners of these patents participated in the undertaking, and an American electrical engineer is its technical director. The "Union" has introduced electric traction into the street railways of many European cities.

The Loewe Company confines itself to the manufacture of machine tools of small or moderate sizes. It secured, a few years ago, the cooperation of a number of Berlin banks in founding a new concern for turning out the largest sizes of machine tools. Relations were established with the Niles Tool Works of Hamilton, Ohio. An American engineer directs the whole establishment. The larger machinery used was manufactured in the United States.

At Chemnitz is the Reiniker establishment, which has the reputation of being one of the best works of the kind in Germany. The significant fact is that Herr Reiniker got his training in a great shop at Providence, R. I.

It is, perhaps, true that at no time in the world's history has one country exercised so deep an influence upon the industrial methods of another in so short a time, as the American machine tool industry has exercised upon German methods since the Chicago Exposition.

MORE LETTERS FROM THE CONSULS

"SINCE 1895, when at the close of the Japanese-Chinese war Formosa was ceded to Japan the consumption of American goods has increased eightfold, whereas English trade shows

ıcrease of eighty per cent., and German an actual decrease during that period. From being third our country is now at the head in imports. There is a large and increasing import of American flour, American kerosene is replacing the native oils as an illuminant, American locomotives are running over American rails and across American steel bridges and there are many other evidences of our presence. The following figures make very pleasant reading :—

IMPORTS INTO FORMOSA FROM

	United States	Great Britain	Germany
1896	$ 287,194	$573,164	$111,612
1897	$ 405,830	$682,888	$176,931
1898	$ 435,054	$808,878	$149,847
1899	$ 691,292	$732,368	$ 45,618
1900	$1,146,337	$921,738	$ 47,171
Increase in five years	$ 849,142	$348,574	Decrease $ 64,440

"The chief items in the import of American goods were kerosene, flour and railway materials. Of the latter we supplied bridge material, $87,244, and steel rails, $300,106. England sent railway materials as follows : Six tank locomotives, wheels and accessories, $104,159 ; bridge material, $159,656; and machinery for the railway shops, $33,743. A convenience which our Government might offer that would show an immediate and profitable return from a commercial point of view is the institution of a system of parcels post with the East similar to that now existing between England and other European countries and Japan. The United States is noted in the East for the superiority of its small manufactures. Countless catalogues of attractive novelties reach the East, and the magazines and trade journals convince us that our wants are many; but so complicated, unreliable, and expensive are the private express services that one finds it impracticable to send to America for anything unless the amount of the order is sufficient to justify having the shipment sent by freight. Complaints of losses through the express services are the rule rather than the exception, and it is an actual fact that a certain well-known photographic dealer in Tokyo informed me, in all seriousness, that his correspondence clerk had standing orders to add to every American letter relating to the possible purchase of goods the sentence : 'Under no circumstances ship by express.'"

Formosa, China.

"Trade between the States and all South American countries is seriously handicapped for want of satisfactory transportation facilities, and by excessive shipping rates. The transportation companies operating between the States and South American ports, as well as between Europe and South America, are none of them controlled by American capital and as a result it costs about one-third more to ship a ton of freight from the States to Chile than it does from European ports. But even so, there is a steady growth in the commerce between the United States and Chile. The superiority of many articles manufactured in the States is recognized by the Chileanos. This is especially true as regards machinery and vehicles of various kinds. The Chilean Government, which owns and operates most of the railways in the country, recently placed an order for six hundred freight cars and ten locomotives, with American manufacturers. The demand is for steam engines, boilers, electrical and farm machinery, and vehicles, such as wagons, buggies and carriages. The lighter grades of American-made vehicles are especially adapted for use on the Chilean roads, which are in a rough and primitive condition. There are in Chile two modern flouring mills, equipped with machinery manufactured in the States. Practically all of the oil used in Chile for lubricating and illuminating purposes comes from the United States. Large quantities of wheat and flour have been imported from the Western States during the past year, and the demand for American cotton goods, shoes, hardware, and coal is building up trade in all those articles in Chile. The prejudice which once existed in the minds of the Chileanos on account of strained diplomatic relations has been entirely removed in recent years, and there now exists the most cordial relations and good will between the two Republics. The Chileanos are called the Yankees of South America. They are quick to see and appreciate the advantages of modern and improved business methods. They also appreciate the progressive spirit of the people of the United States, and are endeavoring to introduce as rapidly as possible American business methods and ideas into their own country."

Valparaiso, Chile.

"Up to the time the South African war began, our trade with this port had been in a flourishing condition. In 1897, imports of American goods were valued at $973,000 and in 1898 these figures doubled. No returns for 1899 are available, but appearances indicated that the imports would again double. Only one country, Portugal, led us in exports to this place, and this is a Portuguese colony and goods from the home country enjoy a preferential tariff, being taxed only one-tenth of products from other countries. Local importers of American goods are making preparations to begin aggressive business as soon as the war is over. There will be a demand for steel rails for 120 miles of track on the Delagoa Bay railway—which like all the other roads in South Africa narrow gauge. The Transvaal portion of railway—some 400 miles of track—will prob have to be entirely relaid, and it is possible this line will be doubled. It is now but

track. These works, together with the contemplated electric street railway and the water system, will offer a good opening for the sale of American goods. There will also be a demand for heavy Oregon pine timber for the new wharves; and for iron work, bolts, steam winches, hoisting engines, etc."

Lourenço Marques, South Africa.

SAVING THE BIG SHIPS

TRANSATLANTIC voyagers can soon sleep through fog and storm serene in the knowledge that a turn of the captain's wrist will make them immune from the worst dangers of the sea. A German invention has been installed on one great ocean liner—later to be adopted by others—by which the officer on the bridge can close the bulkhead doors of every submerged compartment in his ship by simply moving a lever.

These doors have always been screwed down one at a time by a cog-wheel gearing; the *Bourgogne* went to the bottom because her sailors fled from the doors as the water rushed in. Under the new Dörr system the doors can still be closed by hand, but in case of emergency, the watch officer steps to a box just abaft the wheelhouse on the bridge, and pushes over a lever that brings down every bulkhead door from stem to stern in less than a minute and a half. As each door in the hold moves beneath the hydraulic pressure that works the system, an electric bell buzzes a warning to anyone likely to be caught, and as each strikes its sill, an electric light glows out on the wheelhouse wall, where in a frame is a collection of bulbs, one for each door in the ship. When the lights are all burning, the compartments are snugly watertight.

As the system works by hydraulic pressure there is little likelihood of its disarrangement. As the doors move together all the compartments are made watertight simultaneously. As the mechanism is governed by the watch officer from the bridge there is no chance for mistake in the confusion of an accident. The invention seems to mark a noteworthy advance in marine appliances.

A NEW DEPARTURE IN STREET RAILWAY FRANCHISES

A NOVEL treatment of the problem of public franchises in large municipalities is that adopted by the city of Cleveland, O. Here, as elsewhere, the street railway problem has been a troublesome one, and, as in Chicago, Detroit and other Western cities, was an issue of controlling importance in recent city elections. Mayor Tom L. Johnson was elected on the issue of lower fares, no extension of franchises, and reform in taxation. Probably no man in America has had a wider experience in such matters than he. He is an advocate of three-cent fares as a business proposition. As there was no probability of such a concession from the old companies, the city has undertaken to induce outside capital to come in and bid for the construction and operation of a fifty-mile double-track road. Routes have been laid out over the streets and proposals are now called for. The ordinance provides that no bid shall be considered in which the rate of cash fare exceeds three cents, or which does not provide for universal transfers. The other conditions imposed on the bidder are (1) a right of purchase at any time by the city at a price to be obtained by arbitration, which shall include all physical property, but nothing for the franchise. (2) An equal division with the city of all profits in excess of eight per cent. after ten years. (3) A careful stipulation regarding construction, grooved rails, power brakes, arbitration of labor disputes, etc.; and (4) the franchise is limited to twenty years.

The treatment of the subject is unique in that it safeguards the city in advance, and lays down terms on which bids will be received just as in the purchase of any other service or commodity. Ordinarily a franchise is prepared by the attorney of some corporation seeking a franchise, and its passage is secured by his energy, sometimes by questionable means or because of the ignorance of the community. The method adopted in Cleveland protects the city by providing for municipal ownership at any time, and by providing for a division of the earnings, and by insuring low fares. It will be interesting to see how numerous and how satisfactory the bids are.

TUNNELLING INTO NEW YORK

THE plans of the Pennsylvania and Long Island railroads for a series of tunnels into a central station near Herald Square, New York, make one of the most interesting of the many vast rebuilding projects in the greater city. The trains will run into two eighteen-foot tubes on the New Jersey side and under the Hudson River and, a block apart, under the busy city streets. The big station into which the cars will emerge will be approximately 1,500 x 520 feet and will have two miles of platforms and provision for twenty-five tracks. A bridge will extend for two blocks over the tracks and the station will be easily accessible from it by stairways. From this perfectly arranged centre of traffic, the tracks swing eastward in three separate tubes running under Thirty-first, Thirty-second and Thirty-third Streets to the East River where they turn to the north and emerge near Thompson Avenue in Brooklyn. The deep unstable deposits on the bottom of the Hudson River make that portion of the work particularly troublesome and a novel

method of construction patented by Mr. Jacobs of the Long Island Railroad will be adopted. By this plan a bridge resting upon heavy piers, which reach down to the rock beneath, will be built through the mud. The bridge carrying a single track will be enclosed in an eighteen-foot tube.

The results of the completed systems of tunnels will not only greatly facilitate the travel on these particular lines but will make the journeys on these lines easier of access to the people of the city and will bring nearer to each other the terminals of the greater railways systems. Meanwhile it will add to the tearing up of the city which goes along with its remaking.

A GUN THAT DOES NOT KICK

SEMI-PUBLIC tests are being made, in Philadelphia, of the family of new guns, from rifles to quick-firing cannon of small calibre, invented by Dr. Samuel N. McClean, of Cleveland, Ohio. The tests have been witnessed by a number of men concerned in army and navy affairs, and in the capitalization of large ventures. The weapons under test have been manufactured by the McClean Arms Company, and General Joseph Wheeler, now in retirement from active military service, has been chosen for the presidency of the company.

When General Wheeler led his commands at Pittsburg Landing, Gettysburg, and the Wilderness, he saw the tops of the trees shot away in volley firing from the Springfield musket. The cause was in the kick of the gun, whose butt hit back at the marksman's shoulder with a blow that had an impact of from seventy-five to ninety pounds. Two or three blows, such as these, an infantryman stood, but after he had fired again and again, he flinched involuntarily from the recoil, and the gun's muzzle rose to an angle that wasted from ninety-five to ninety-eight per cent. of the ammunition. Even with the Krag-Jorgensen, in the Philippines, the men were prone to have recourse to firing from the hip, leaving as much to chance as to the marksman's eye.

On shipboard and on land, the great question of ordnance, light and heavy, has always been the gun's recoil. The old field gun had a trick of running backward from twenty-five to thirty feet whenever a shot was fired, and nine-tenths of the time required for reloading was occupied in restoring it to position. The new field guns are equipped with spades, which, tilting at the surface of the ground, seize fast hold at the instant of the backward leap, and brace the gun against a long recoil. Yet, even here, the weapon has something of a broncho's jump, and comes to earth with its aim deflected. On shipboard the principle of hydraulics has been applied.

There was a man in Cleveland who regarded the recoil as a mere sequence and surmised that the real solution lay in the comprehension of the cause. Dr. McClean propounded to himself an axiom: Action and reaction are equal. He made the deduction that if he could stop the recoil at the muzzle instead of the butt, he would have the thing solved. He sought for and constructed the simplest form of gas engine—a vent, a piston rod and a spring—which he located near the muzzle of the gun. The projectile served as the check for the gases until they reached the vent, into which they entered. At practically the same instant with the explosion of a cartridge, the forward pull of the discharge was utilized to counteract the recoil. The result was a gun which had no recoil whatever, and remained practically stationary in its position at the instant of discharge, no matter how rapid the firing. The inventor, from mechanician, turned law student, and made a comparative study of the patent laws of this country and Europe. After that he took out patents for three hundred claims.

The results, in actual warfare, remain to be accurately defined. The results in experimentation have been altogether favorable. The energy of the gases generated by the explosion of the powder in a rifle, is from sixty to one hundred times as great as the striking energy of the rifle ball. In the modern high-pressure guns, using smokeless powder, the powder pressures range from forty thousand to sixty thousand pounds per square inch, while the velocity of the projectiles is from one thousand five hundred to two thousand five hundred feet per second. The energy which escapes behind the projectile at the muzzle of a gun increases rapidly with the weight of the ball. In the ordinary three-inch field gun, from two hundred and sixty to three hundred tons of energy go to waste at the gun's muzzle at each discharge. The recoil of the three-inch gun has an impact of from fifteen to sixteen foot tons. The McClean guns, on a light carriage and lacking any recoil guard, can be set on a plank floor and fired with great rapidity without the smallest disturbance of battery position or of aim. The rapidity of fire is as great as that of guns now in use or greater, and the power of penetration for all projectiles bears favorable comparison. Rifle fire has attained a rapidity, measured by the revolving disk, of 1,500 shots per minute. From a gun fed with sufficient speed, the shells ejected buzz in the air like a cloud of flies.

Dr. McClean finds in his device a complete counteraction for recoil in the great guns of the navy's battle ships, as well as in the rifles and field guns used in land operations. As yet there have been no guns larger than field artillery made for test purposes. The public trials have been limited to exhibitions of the smaller ordnance.

THE WORLD'S WORK

MARCH, 1902

VOLUME III NUMBER 5

The March of Events

THREE events that happen to be almost simultaneous remind us of our pleasant relations with all foreign Powers —the complimentary visit of Prince Henry of Germany, the pan-European assurance of good will to us during our war with Spain and of present friendship, and the influence of the pan-American Conference at Mexico in allaying the South- and Central-American suspicion of us. Instead of entangling alliances, therefore, which it was feared would follow our activities and responsibilities as a World-Power, we have gained not only far greater esteem than we ever enjoyed before, but apparently also (and we think surely) a firmer basis for perpetually amicable relations.

The nations of the earth speak two languages in their foreign relations and only two —the language of power and the language of trade. We know them both and we have shown that we know them both. The old feeling of indifference or of contempt with which we were long regarded has, therefore, naturally given place to a feeling of very much greater respect than we ever before inspired.

There is this difference between the former attitude of the Old World to us and its present attitude. Heretofore individuals and certain sections of public opinion in every foreign country had an enthusiastic regard for the institutions of the Republic; but foreign Governments themselves, courts and rulers and chancellors and military opinion, held us in slight esteem, as

"Unkempt, disreputable, vast."

And not unnaturally. But three recent events have greatly changed their feeling toward us. These three events were the demonstration of our naval efficiency; our acceptance of "colonial" responsibilities and our success against all preconceived notions of the ability of a Republic to do such a task; and our rapid development of a foreign trade. For these reasons foreign Governments themselves, as well as intelligent non-official foreign opinion, now regard us more highly. And the evidences that they give of this esteem are not the less pleasing because they happen to come in somewhat embarrassing profusion. If Uncle Sam blushes while he bows, we trust that he will be forgiven, for in recent years he has had occasion to feel and to express as best he could many new emotions.

GERMAN-AMERICAN COMPLIMENTS

THE visit of Prince Henry is wholly agreeable, for it is pleasant to receive in so complimentary a way as at his hands the German Emperor's assurance of his esteem and his

wishes for continued cordial relations with the United States. If suspicions have ever in recent years been concealed beneath the surface of the long unbroken friendliness between the two Governments, the people of the two countries have always had many bonds. A vast number of worthy and sturdy American citizens are German, and by blood and traditions they link us closely to their fatherland; and many more who are yet in that state of transmigration indicated by the name they give themselves—"German-Americans"—even bring the social customs and the language of their nativity into our everyday life. We have several German cities—Milwaukee, for instance; and, of course, not a little of the best in most of our great cities—New York, Cincinnati and Chicago in particular—we owe to German thrift, character, and culture. For forty years, too, the German universities have been the training places for most of our best scholars in linguistic studies and in science; and German music has found its most profitable home here and the heartiest welcome outside the fatherland. The mutual obligations of the two peoples are very great, and it is both pleasant and wholesome to have them emphasized as they are emphasized now. We are very glad to show our appreciation of our debt to Germany by paying honor to one of its royal princes; and we hope for peace and for permanently cordial relations with the great Empire from which he brings imperial greeting.

THE PAN-EUROPEAN CHORUS OF GOOD WILL

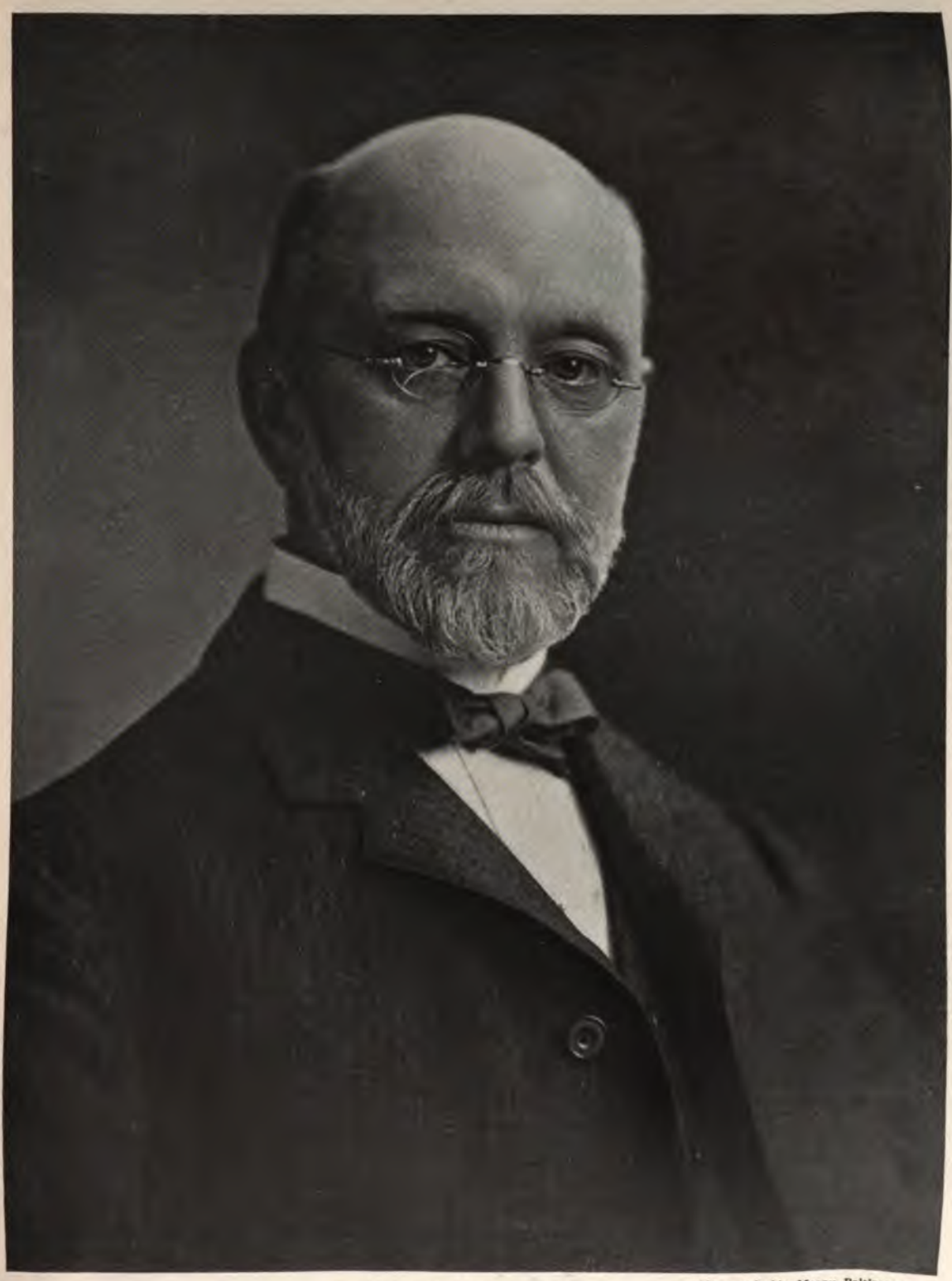
WE hope for permanent peace and continued cordial relations likewise with all the great European Powers who assure us, in chorus, of their esteem; for we are having a season of pan-European declarations of friendship for the United States that is both gratifying and significant. Great Britain's good offices during the Spanish war were officially made known in the House of Commons on January 20, when Lord Cranborne declared that the British Government declined to assent to the proposals of some Power or Powers which might be construed as a threat to the United States. Thereupon official or unofficial denials of any unfriendly act toward us were given out at almost every European capital. It is a matter of record, of course, that in March, 1898, before the war began, a joint note, at the instance of Austria, was sent to our Government by the principal European Powers expressing hope that peace might be maintained, and suggesting their good offices. This note was signed by Great Britain after ascertaining that it would be agreeable to the United States to receive it. President McKinley's reply was a courteous acknowledgment and a polite refusal of the implied proffer of good offices. So much, of course, is history.

It had been understood but it was not officially made known before Lord Cranborne's statement, that a joint agreement to go further, perhaps even to intervene in behalf of Spain, was proposed by some of the Continental Powers, and that the plan failed because England refused to become a party to it. Lord Cranborne's declaration confirms this understanding, but he refrained from saying what Power or Powers thus approached the British Government. Russia also declined to accede to a proposal of a similar nature. One report has it that Germany, Russia and France, along with Austria, were all in favor of intervening. But disclaimers have been made from St. Petersburg, Berlin and Paris. The German denial admits that "suggestions" contemplating intervention were made to the German Government, but it adds that these suggestions were not from an Austrian source.

The most that is made clear by these statements and reports is that Russia and England were definite in their declinations to join with any Power in any effort to bring pressure to bear on our Government. But a more important matter than rumors and conjectures concerning the attitude of other Powers then, is the fact that they are now all friendly to us, and that they have used Lord Cranborne's statement as an occasion to assure us of their good feeling. The incident is significant as a reminder of the increased value of our goodwill since 1898.

A GENERAL VIEW OF OUR FOREIGN RELATIONS

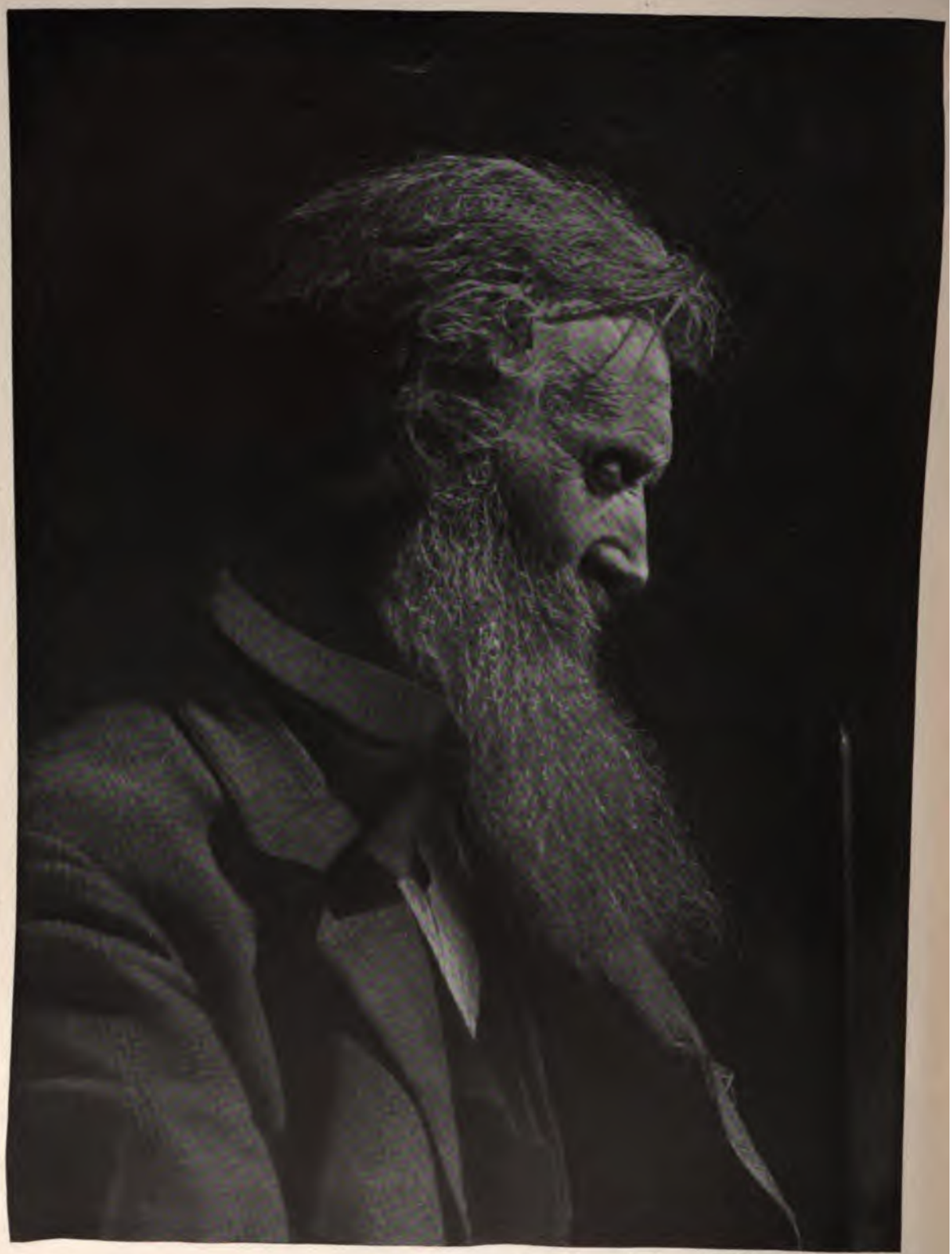
WE have had strong friendships with many nations lasting over long periods, and we have had few enmities that were long-lived. The memory of our hostility to England kept itself alive and was kept alive by Irish agitation for a longer time than our unfriendly



Photographed by Mesny, Baltimore

DR. IRA N. REMSEN

The new President of the Johns Hopkins University, Baltimore



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JOHN MUIR

Author of "The Mountains of California" and "Our National Parks," who has made lasting literature out of his interpretation of nature on its largest scale

feeling to any other nation. At one time during the Civil War there was, of course, grave danger of conflict over the *Trent* affair. And the sympathy of a large part of the ruling class in England with the Confederacy kept the two countries from that cordial relation which blood and language and many common institutions were bound in the end to establish. But in recent years there has been a very steady and sincere coming-together of the two Governments and of the two peoples—we are one people, in fact, in blood and in our largest characteristics. And in institutions and in point of view the English have constantly come nearer to us. Their society retains its fixed orders and with many of their Old-World institutions we have no sympathy. But the broadening of the electorate and other such political reforms have brought them further towards our own political ideals and practices. When, therefore, during the Spanish war England showed herself our friend in a positive way, much was done to bring about that natural alliance, without any specific or formal agreement and without any governmental or diplomatic compact or obligation, which the great economic and race forces of the time make desirable and necessary. We are fast coming to see and to understand that the largest fact in the politics of the world is the essential unity of the English-speaking peoples.

This close and probably permanent relation between England and the United States and between the peoples of the two countries (which is constantly made closer by commercial bonds) does not conflict with our amicable relations with other Powers. Russia in particular has for a long, unbroken period been friendly to us. During the Civil War when other European Governments were ready to find occasion to recognize the Confederacy, Russia did us the supreme service to send her fleets to our Atlantic and Pacific coasts. When the Russian admirals made these friendly calls on us, the rest of the world understood. Later, when England would gladly have bought Alaska, to make her North-American territory in a sense geographically complete, we bought it for reasons that many men did not then understand. And in the Spanish War Russia showed so positive a neutrality as to amount to an act of definite friendliness.

The other great Powers of the Continent, whatever jealousies they have of one another, are sincerely friendly to us—Germany, in spite of our diametrically opposite political institutions, and France, in spite of the French dislike of the English. Distracted Austria was bound to Spain for dynastic reasons, and an agitation for a defensive alliance against the "American invasion" is still kept up by her initiative. But the American invasion is not seriously hindered thereby. Even in Spain it goes on to the profit both of Spanish industry and of American trade; and we are sending a former minister as a special envoy to represent our Government on the coming of age of the King.

International friendships, it is often said, do not rest on sentiment. Sometimes they do. The friendship of France, for instance, during our Revolution had much sentiment in it, although it had a basis of good diplomacy as well. The present American-English relation has much sentiment of a noble kind. But there are stronger international forces than mere sentiment; and the strongest quality that a nation can have to attract the friendship of other nations is a well-earned and honorable success in large enterprises coupled with just dealing. We have won the greater respect of the world than we before enjoyed by the success with which we have taken up the large tasks of the last four years, by our expanding trade and by our well-managed foreign relations. We owe most to the demonstration of our practical efficiency, but we owe much to the accomplished Secretary of State who has directed our foreign dealings in so important a time.

It is quite as gratifying, too, that our relations with the lesser Powers are as satisfactory as with the greater. The natural sympathy felt for Spain by some of the Central and South American peoples aroused their suspicions of our purpose. But the Pan-American Exposition and, still more, the Pan-American Congress at Mexico have gone far to remove it. And the part we played in the Chinese trouble was a creditable chapter in our international history.

The large fact that stands out from any review of our place among the nations is that power as well as just dealing is necessary to win and to hold the world's esteem; and the lesson that recent events have most forcibly taught is that a timid fear of "entangling alliances" is the very soil that entanglements

Photographed for THE WORLD'S WORK by Hollinger

DR. NICHOLAS MURRAY BUTLER

The new President of Columbia University, New York

r in. It is a cheerful reflection that our ions with all the world, in this period of expanding activities, make not only for e but for the better understanding of blican aims and institutions.

IE FEDERAL CONSTITUTION THREATENED?

'HE number of amendments to the Federal Constitution that have been pro- d in Congress in recent years is surprising. : of them are the plans of "reformers" irious types who have not made the prog- by agitation that they hoped for under ing social and legislative conditions, such ıe Prohibitionists. Others are plans for ng right or cutting off certain methods of edure that have been radically changed sage since the early days of the Republic, as the working of the electoral college. rs are plans to repeal or to modify cer- sections of the Constitution that have be- : practically inoperative, such as the post- m amendments that fortified the freed- s right to suffrage. But the proposed ıdment that has been most talked nd for which public agitation has been active is the one to change the method ecting United States Senators, so that may be chosen by popular vote. In sev- States they are now practically, though, ourse, not formally, so chosen. It is that at some time in the Legislatures of -fourths of the States a resolution in of the popular election of Senators has passed.

ıere are two ways to change the Federal titution. If Congress frames a single dment and submits it to the Legislatures : States and three-fourths of them ratify thereby becomes a part of the Constitu-

It is in this way that amendments have adopted since the framers of the Consti- ı made it. The other way is far more ing and it has never yet been used. Two- ı of the States (that is, thirty), may unite king Congress to call a Constitutional ntion, and Congress would be obliged to . The work of such a convention would e ratification by three-fourths of the s. In other words, it requires the united ı of two-thirds of the States to have such vention called, and the work of the con- n would require the ratification of three- ıs of them before it could become operative. But in this way not only single amendments to the Constitution could be made, but amendments and changes of any and every sort. In fact, a new Constitution could be adopted.

It is difficult enough, and perhaps it is practically impossible, to have a single proposed amendment submitted to the States—even an amendment providing for the popular election of Senators—but it is even more difficult to induce two-thirds of the States to demand a general convention. So far as practical men can foresee, this now seems impossible. But if such a convention were called the votes cast in it would be cast by States, and Nevada or Montana would be as strong as New York.

This feature of the method of making general changes in the Constitution is the one fact that is causing somewhat serious discussion. Thirty of the smaller States, among which would be those that are subject to periodic crazes, might have a general convention called, and, in such a convention, a little State with a big craze would cast as many votes as the most important commonwealth in the Union. The framers of the Constitution never dreamed that one State would be of such little real importance in the Union as several now are, and this very method of providing for a general convention is perhaps one of the unforeseen weaknesses of the Constitution; or, to put the same thought in another and better way, we have created States that ought never to have been created.

The danger of a general convention is remote, too remote to be disturbed about, even if there be a systematic agitation for it. But the possibilities of unsettling the fundamental law and the social results of the whole life of the Republic are enough to make a man shudder who believes in evolution rather than revolution. The economic, political, and social disturbance caused even by the Civil War was insignificant in comparison with the disturbance that might follow even the call of such a body. And yet—for revolutions and efforts at revolutions have done much for human progress—this remote and difficult method of trying to uproot stubborn vested evils is, no doubt, a good method to have in reserve as a last card if the game of industrial politics should run too far towards the undoing of individual liberty.

THE LARGE FACTS ABOUT THE PHILIPPINES

THE appropriate committee of the Senate, of which Mr. Lodge is chairman, is making an investigation of conditions in the Philippines. It is a piece of very good fortune that, just when the investigation was begun, Mr. Taft, the Civil Governor of the islands, had come home for his health; and the committee as its first work took his testimony at a number of sittings. The substance of what he said is contained in the latest Report of the Commission, but his testimony before the Senate Committee has had a much wider reading through the newspapers than any report could have. The crucial matter of Governor Taft's testimony is this:

The people of the islands are incapable of self-government, and will be incapable for a generation or two.

The mass of them desire peace above all things, and the great majority of them are perfectly content with American rule.

If left to themselves they would show themselves children and tyrants; for they have no proper conception of what we mean by independent government.

The Commission has established civil government in a majority of the provinces—wherever it has been possible; war in any organized sense has long since ceased, and brigandage is undergoing suppression as fast as could be expected by any one who knows the various peoples of the archipelago and their history; the Commission is making progress in educational work which is eagerly welcomed; and the natives themselves take part in the municipal governments.

Such is the testimony of the most competent man to form a judgment that we have sent (and as competent as any that we could send) to the islands. He has had opportunities, which he has improved with diligence and intelligence, to collect first-hand information and to form sound conclusions. There is no better way to find out the truth. And Governor Taft's observations and conclusions are fortified by the observations and conclusions of practically every responsible civil or military servant that we have sent to the islands. If it be not conclusive, no testimony and no judgment can be conclusive.

Our policy in the Philippines, therefore, will be and must be determined in the future by these large facts, as it has been determined in the past. Whatever we might wish to do, there is only one thing that we can do with honor as a responsible nation; and that is the plain duty of keeping these people in tutelage till they are prepared for self-government, and to give them self-government as fast as they are capable of conducting it. Any other course would be a crime against civilization. This policy has not been more plainly outlined by anybody than by the President in his message to Congress. Our way is not only plain: there is only one way; for in the face of all responsible and well-informed testimony the abandonment of these people to themselves would be more than a neglect of duty. It would be a crime. So much seems plain.

THE SUPERSTITION ABOUT THE PHILIPPINES

BUT unfortunately the subject of the Philippines has passed in many men's minds—in the minds of some good men too—outside the range of subjects about which they reason from the larger facts. They seize on the small facts, such as a form of punishment that has been called torture (if that be a fact) of some Filipinos by some disobedient American soldiers. Any unhappy incident in the work of cleaning the land of brigands is seized upon and discussed not as a subject of discipline for the offenders, but as an indication of an American purpose to enslave a brave people. The same method of criticism would have demanded the ending of the Civil War on almost any day after it began; and it would demand, in fact, the cessation of police-work in any large city.

More unfortunate yet, the Democratic leaders both in the House and in the Senate have shown in the violent debates on the subject that they wish to project it into the next Congressional campaign. We shall hear, then, more and more of "imperialism"—for political effect.

Yet any thoughtful man who has read the reports of all our servants in these islands, both civil and military, and who looks at the large facts as well as at the small incidents, knows that no violence of partisan discussion can change our policy by a hair's breadth. If a Democratic President were in the White House and a large Democratic majority were in each end of the capitol and the "anti-Imperialists" were among them, no different policy could be carried out. Events and con-

ditions determine what we must do; and, whether we do it ill or do it well, we can in honor pursue no other general policy. And no responsible or thoughtful man has even proposed any other policy. Criticisms of bad administration are always in order. But railing against a general policy that has been made necessary by events and by nature itself and by our own character as a responsible nation—this keeps alive the hopes of the malcontents in the islands; and it is hard to see what other effect it can have.

But there is one other effect: namely, a possible effect on our own Government officials in the Philippines and in the public service in general. There was a unanimous opinion when the present Philippine Commission was appointed that the Commissioners were men of high character. Some of them, perhaps all, accepted the appointment at great private sacrifice. They were sent to ascertain the facts and to take this large and difficult task in hand as best they could; and they have done so. They are honorable men who have given their whole time to the problem. They are sworn, too, to do their duty and to tell the truth. They have had far better opportunities to find out all the large facts and to form sound conclusions than anybody else. The natural thing for public opinion in the United States to do would be to accept their report with confidence and with appreciation of their service.

When, then, a considerable body of men gives more heed to newspaper correspondents and to members of Congress who made a visit of a few weeks to a few places in the islands, the inference is that our own Commissioners are incompetent or that they have made a conspiracy with the Administration to suppress the truth and to oppress the inhabitants of the archipelago. Such an inference implies the utmost baseness on the part of the President and his Cabinet, on the part of every Commissioner, and on the part of everybody else who has a hand in the Government of the islands. So preposterous and unjust an inference (or accusation) no man would make in private affairs. This violent ingratitude toward high-minded and efficient public servants makes the public service less attractive to honorable and sensitive men, and has a tendency to degrade it. For this reason it is exceedingly unfortunate that the Philippine question should have been transferred in many men's minds from that group of subjects about which they reason to that other group of subjects about which they have superstitions.

THE TWO LARGE SUBJECTS BEFORE CONGRESS

THE two great subjects before this session of Congress for practical action are, of course, the Isthmian Canal and the adjustment of colonial tariffs, including a reciprocity arrangement with Cuba. The consideration of the canal has been postponed since the holiday recess; but the Canal Commission made a supplementary report unanimously recommending the Panama route after the French Panama Company offered its unfinished way for forty millions of dollars. "After considering the changed conditions that now exist and all the facts and circumstances upon which its present judgment must be based," the report concludes "the commission is of the opinion that 'the most practicable and feasible route' for the isthmian canal, to be 'under the control, management and ownership of the United States,' is that known as the Panama route."

The House, it will be recalled, passed the Hepburn bill authorizing the cutting of a Nicaragua canal, but the Senate has not yet taken action. The predominance of opinion seems to favor the commission's supplementary report in favor of the Panama route. The strong public demand is for a decision of the question at this session of Congress.

The other subject of pressing importance is the adjustment of tariffs to the necessities of the Philippine Islands and of Cuba. As often as the Philippine tariff bill has come up in the Senate (up to the time this is written) a violent debate has followed on the whole question of Philippine administration. These debates have shown that this subject provokes more earnest feeling than any other public subject now under discussion.

As regards Cuba, the Ways and Means Committee of the House was at first opposed to making concessions to Cuban sugar and tobacco. But the President has strenuously insisted upon some such measure of relief as our bounden duty, and the best public opinion of the country supports him. Such influential Republican and Protectionist Senators as Mr. Proctor, of Vermont, and Mr. Platt, of Connecticut, are

earnestly in favor of a reciprocity arrangement. Governor Wood of Cuba wrote an open letter to Congress in which he declared in the most forcible way that immediate economic relief is necessary. That failing, industry in the islands will quickly fall back into the deplorable state in which we found it just after the war, and the people are threatened with poverty, even with want. The outlook now is that a reciprocity tariff will be granted, but the sugar-growing interests of the United States have so opposed such action as to discredit them. The stubbornness of the ultra-protectionists has aroused threats of a revolt in their own ranks, and the moral obligation to Cuba is likely to override the economic rigidity of the extreme protectionist doctrine.

But this subject, as well as the administration of the Philippines, is discussed in Congress with reference to the next Congressional election. Considered politically, it seems to independent observers that the Democrats are likely to win public favor by good use of the tariff issue, and that they are equally certain to thresh over old straw without finding wheat in their policy of obstructive criticism of the Philippine question. A low-tariff Congress could reduce the Dingley duties. But it is hard to see how any Congress could materially change the tough problem in the Philippines or modify the present effort to solve it. One is a subject for possible action, the other chiefly an opportunity for editorial and Congressional oratory on Liberty.

A PROBABLE CABINET DEPARTMENT

IT seems likely that the proposed new Department of Commerce, or of Commerce and Labor, will be created by Congress and made of Cabinet rank. Several bills have been introduced, but Senator Nelson's seems the most likely to be enacted. The main concern of the new Department is to be our commercial relations. But the Bureau of Foreign Commerce is the smallest of the many bureaus and boards that the Nelson bill includes. It takes in such apparently unrelated activities as the Lighthouse, and Life-Saving Service, the Coast and Geodetic Survey, the Patent Office, the Department of Labor, Fish and Fisheries and the Bureau of Statistics (now under the Treasury Department). Some of these will doubtless be excluded and others (the Interstate Commerce Commission, for instance) may be included.

The underlying idea is that the new Department will cause more attention and more direct attention to be given to the large commercial subjects that take so much of the public thought—the facts about foreign commerce, reciprocal and retaliatory tariffs and such domestic problems as interstate trade. Some of the miscellaneous Bureaus and Departments which it will assimilate are regarded as good instruments for a larger purpose, and some of them as merely unclassified activities that have no logical connection with the Departments to which they now belong. One consideration that has influence in commending the plan to the political mind is that it will please the labor organizations.

It is possible and indeed easy to see how a Cabinet Department may be created that will not only relieve the existing Departments of several unrelated Bureaus, but will emphasize Trade and Labor, and even more efficiently gather and classify the facts about them. The history of the Department of Agriculture is very instructive and suggestive.

THE PURCHASE OF THE DANISH ISLANDS

A TREATY for the cession of the three Danish West Indian Islands, St. Thomas, St. John, and St. Croix, was signed and submitted to the Senate in January, and early in February the Committee on Foreign Relations favorably reported it and recommended the purchase by the United States for five millions of dollars. Thirty-five years ago we made an effort to purchase them, but there was at that time no such good reason for acquiring them as there is now. Since we have Porto Rico as our ward and are soon to cut an isthmian canal, these three islands have become of strategic importance, "whether," as the Senate Committee's report says, "the strategy be military or commercial." A glance at the map will show how they are the key to the Caribbean Sea. Their importance to us is of a positive sort, but there is also another reason why we should control them—to prevent their sale to any other Power.

Industrially these small islands are of no great value, although they have a population that is sensible and well-to-do. The imports into the United States from them are a little more than half a million dollars a year, and

the exports to them a little more than six hundred thousand. Their commerce and their industries and their administration present no problems of difficulty. The crux of the whole matter is their location. St. Thomas is a natural site for a strong military outpost —a sort of Gibraltar, in fact.

IOWA TO THE FRONT

THE prominent place that Ohio so long held in the administration of the Federal Government has for the time being been taken by Iowa. The Secretary of the Treasury, the Secretary of Agriculture, the Speaker of the House and the Chairman of the Finance Committee of the Senate, Mr. Allison, who will soon enter on the longest period of service that any man has had as Senator, for he will soon begin his sixth term—all come from Iowa. No other State has representation at Washington in so many and such various positions of the first rank.

The case of Iowa is different from the case of Ohio in one very important respect. Ohio was a "pivotal" State. At one time it held its State elections several months before the national elections, and the public men of the State had an unnatural and undue prominence for these reasons. Indiana has at times played a more than usually important part in national politics for the same reasons. But Iowa is not a "pivotal" State and it does not hold early elections.

In a sense its prominence may be called an accident. But there is at least a plausible explanation in the character of the people. The State has no large city. Its population is a rural population, seventy per cent. of which is of American stock. In comparison with Illinois and Ohio, for example, it is not a manufacturing State. It is a community of farmers, who are perhaps the most successful farmers in the world. It would be difficult to name any other agricultural area on the globe as large as Iowa that is the home of as many persons who have won wealth from the soil—not a mere subsistence, but such comforts and luxuries as few agricultural communities have hitherto known.

And the people are of singularly uniform character. They do nothing radical as the people of Kansas, for example, often do. They are not given to trying either social or political experiemnts. They have never become excited. They are among the most conservative people of the country — uniformly thrifty, stable, unemotional. They have not produced national heroes. You never hear of the great men of Iowa. In fact, you never hear much about Iowa. But this very conscientious attention to their own tasks has developed a type of safe and useful men. The present prominence of the Iowans may, then, be more than an accident.

THE ROLE OF A HERO IN A DEMOCRACY

THE possible "Boulangerbility" of the American public is a phrase out of a daring vocabulary which is suggested by Rear-Admiral Schley's recent visit to a number of cities, chiefly in the South. He was received not as an officer who had just had an adverse verdict from a naval court of inquiry concerning his conduct, but rather as a conquering hero. He was everywhere greeted as commander-in-chief at the battle of Santiago. At the very time of this triumphal procession the President was carefully reviewing the case; and on the very day when Rear-Admiral Schley returned to Washington the Navy Department republished in a communication to Rear-Admiral Sampson (informing him of his retirement) the letter of thanks that President McKinley wrote to him after the battle of Santiago as commander-in-chief of the naval forces in the Atlantic.

In other words, the hero-worshipping part of the Southern people were declaring, contrary to the decision of President McKinley who had and who exercised the power of appointment in the navy, that the chief command at Santiago was not held by the officer whom he had put in command! Resolutions were offered in several State Legislatures on the purely technical and formal subject of this part now long past of our naval history; and a member of the Kentucky Legislature proposed that no school-book should be used in the State that did not declare Rear-Admiral Schley the commander of the fleet. This considerable part of public opinion, therefore, disported itself in its hero-worship in defiance of the court of naval inquiry and of naval opinion and of the record left by the President who appointed the commander of the fleet; all of which will seem very absurd a year or two hence.

The subject has a deep psychological inter-

est in proportion to its historical shallowness. What is the real meaning of this public dislike of naval opinion and unwillingness to accept the verdict of a naval court on a subject purely naval and technical to boot? An answer may possibly be found in these considerations: in times of peace raw public opinion dislikes the navy. Naval organization, rank and discipline are essentially aristocratic. A captain is and must be an autocrat, perhaps a despot. Rank has a value afloat that is inconceivable to the democratic landsman, and repugnant to him if he do understand it. On the other hand, the tendency of a naval training and experience is to breed in the officer something akin to contempt for the mere citizen. The ordinary man is a mere unit in a large mass. He stands for nothing in naval eyes; whereas an officer is a selected servant and upholder of his country.

This unconscious dislike, if dislike be not too strong a word, has doubtless had something to do with the violent indignation with which a part of the country has received the findings of the court against Rear-Admiral Schley. Here is a brave officer whom the navy misjudges—down with naval opinion: he is our hero!

These reflections are not made as a contribution to the old controversy (Heaven forbid that anything more should be contributed to that!) but as a study of a curious phase of hero-worship.

Another noteworthy fact about this belated and extraordinary outburst of hero-worship is that as soon as it burst it began rapidly to disappear, as is perhaps always the case. No sooner had Rear-Admiral Schley gone on his journey and been welcomed as a hero than his friends in Congress who had been eager to introduce resolutions in his behalf became silent; and very soon silence will fall over the whole vociferous incident, as silence fell, after a storm, over Admiral Dewey. A conquering hero in a democracy—that is the most difficult rôle to play, for more than one performance, that ever man undertook or was by friends or fate misled into trying.

THE SUCCESS OF THE STEEL CORPORATION

WE used to think in thousands of dollars, but now we think in millions—and it is just as easy—this has become a trite remark in financial circles. But thinking in billions is yet a new operation in which the report of the United States Steel Corporation for the first nine months of its existence has given those who studied it a little experience. Apart from what may be called the morbid interest, the legitimate interest in this titanic industrial organization is of many sorts. Sixty thousand persons own shares in it, and its report has to be printed in a larger edition than books, except a few popular novels, ever reach, or than most periodicals ever obtain. Financiers, of course, follow it keenly, and merchants and exporters—the whole business world, in fact. But so do all students of contemporaneous economics, for if this great combination turn out to be as successful as many smaller ones have, its example is likely to be followed in other industries. At any rate, efforts will be made at other such enormous consolidations.

The corporation has had a prosperous period, and it shows a satisfactory profit. During these first months there were expenses of many kinds that are not expected to recur; but the earnings for nine months were nearly eighty-five millions, a little more than eight per cent. on the total capitalization. After the payment of dividends, interest, and depreciation charges, there was a balance of nearly twenty millions. This is a prosperous showing.

But it is not the mere size of the profits in which the chief public interest is shown, but rather in the inquiries whether the great aggregation has done better service to the public, and whether it has proved or is likely to establish the important economic principle that consolidation means economy in production. The report gives favorable evidence, as far as nine months' experience can be valuable, in both these ways. The number of orders that it has received would have enabled it to raise the price of many of its products, but its managers, both by reason of their own wisdom, no doubt, and because of the fear of public opinion, decided not to increase the price; and the report relates that important economies have already been effected. The publicity that the managers have given to the affairs of the great corporation since it began its existence has exerted a wholesome influence as an example to be followed by others.

In the meantime Mr. Carnegie has been endowing great institutions of learning and

research with its bonds, and Mr. Schwab, the president of the corporation, has been talking with royal personages in Europe and having other princely diversions in a well-earned period of recreation—all which goes to show that Greater Industry has reached that stage of expansion and importance that entitles it to capital letters and to recognition in other worlds than the world of business. The steel corporation, so far at least, successfully represents the furthest development of the most noteworthy new form of contemporaneous activity in the United States.

THE "LAWS" OF BUSINESS SUCCESS

BRADSTREET'S Commercial Agency, following its annual habit, has lately published an analysis of the causes of the 10,648 commercial failures during the year 1901. The percentage of failures was not large, considerably less than one per cent. The causes set down in the order of the number of disasters attributed to each are, lack of capital (3,223). incompetence (2,023) "specific conditions" (1,755), fraud (1,154), inexperience (828), competition (466), unwise credits (376), neglect (322), failure of others (259), speculation (141), extravagance (101).

These classifications, translated into moral terms, could be reduced to a much smaller number. Lack of capital, for instance, in most cases, but not in all, means some degree of incompetence or lack of sterling qualities; for most men who cannot secure credit confess by that very fact that they have not made a strong impression in their communities. It amounts to a confession of incompetence or of a lack of positive character and energy.

Under "fraud" there is a very small number of failures classified, as might be expected. The commercial world is now so well organized in most parts of the country that one fraudulent transaction by a man is likely forever to end his career. This thoroughness of organization has, along with other reasons, wonderfully "toned up" commercial morality. Nor do a great many (although more than usual) attribute their failures outright to the severity of competition; and unwise credits caused an amazingly small number of disasters. The organization of commercial information has wrought a great change and gives good protection. But the most gratifying of all the facts shown in this classification is the small number of failures that are credited to speculation and extravagance. No moral philosopher who has two eyes and two ears can delude himself into thinking that speculation has been eliminated from business or that few business men are extravagant in their personal expenditures and in other ways. But the tendency is a strong one, beyond a doubt, toward the elimination of these vices from the working ranks of business. The victims of speculation and extravagance are those who are not engaged in these working ranks, but are on the outskirts.

Success, if these figures give a clue to it, is won by the eminently good American traits of character and industry and skill. It is these that secure credit, that accumulate capital, that prevent incompetence. A trite conclusion surely; but there is no thumb-rule or pocket-recipe for commercial success. Indeed, the quality or qualities that lead to conspicuous commercial achievement are as elusive and as subtle as the qualities that go to make a poet or a beautiful woman. One man of character and industry and skill will succeed—these great virtues seldom permit a failure; but another man engaged in the same business under apparently the same conditions and with apparently the same qualities, will make a conspicuous success. One does well; but the other makes a great fortune; and you can't tell why, with scientific exactness. The individual counts for everything; and even the leveling effects of organization have not lessened the play of purely personal qualities.

THE MARGIN OF SAFETY

TWO recent fatal "accidents" in the very centre of New York City—the tunnel collision on the New York Central Railroad and the explosion of dynamite in a shed of a Subway contractor—revive the question of the margin of safety in industrial life. It is usually taken for granted that the multiplication of precautions goes on at a faster rate than the multiplication of dangers to human life, but whether this be true seems doubtful. Take, for instance, the record of accidents to employees of railroads. The percentage of the number killed or hurt is smaller than it was in the earlier days of railroad work before many safeguards now in common use

were adopted; but the percentage of deaths and injuries has not in recent years been materially reduced. Mining is safer than it was, and most of the mechanical industries have reduced the risk of disaster. The practically universal inspection of boilers and elevators, for instance, as required by law, has greatly reduced the death roll. But it is doubtful whether the margin of danger has by any means been made as narrow as it might be.

It will not be obliterated till men get rid of the notion which is even yet often advanced that there are "accidents" which no human foresight could have prevented. This theory is that since human sight and hearing and judgment are imperfect, there will continue to be a danger margin from the unexpected and unpreventable failing of men to close a throttle, or to see a signal, or to act with the necessary swiftness in an emergency. But this theory is really a confession of bad industrial organization. Ferry-boat accidents are very much fewer since the law required the presence of two men in the pilot house. The running down of persons in the streets by reckless automobile drivers is surely a preventable "accident," for severe punishment will act as a spur to caution. In some cities the accidents from street cars are very much fewer than in others, for it is a matter of training and of alert public opinion.

There has been as much constructive thought and ingenuity spent on devices and plans for the elimination of danger and on insurance against it as on the development of any industry itself, and the tendency of all modern organization is towards such definite divisions of duty as will ensure keen hearing, sure sight, clear judgment, and prompt action wherever they may be suddenly needed. Still, the margin of danger exists to a degree that is not creditable to the most fertile people in the world in devices for reducing it.

THE SLOW GROWTH OF CHURCH MEMBERSHIP

DR. H. K. CARROLL, who has for many years collected and published the statistics of church membership in the United States, reports that the gain made in 1901 was somewhat more than two and a half per cent., which is a little greater than the annual gain in population. But since the Roman Catholic church in his report has a "membership" as large as the six largest Protestant sects together, and since its rate of increase was very much more rapid than the increase of any Protestant sect, the Protestant churches grew at a considerably slower pace than the population, though such a comparison is, after all, misleading.

However careful Dr. Carroll's own work may be in collecting his figures, it is doubtful whether church statistics are ever as accurate as statistics of trade and finance or even of population; for the reports of membership are made by men who are not used to statistical work and in whose minds "attendants" and "adherents" are sometimes, in a statistical sense, equivalent to "communicants." The Roman Catholic church indeed reckons as members all who have ever been baptized into it. Nor are the rolls of communicants correctly kept in many churches. Still the general tendency shown by this report corresponds with the observation of most careful men—that the Roman Catholic church makes rapid headway and that most of the Protestant sects do not.

This general tendency corresponds, too, with the financial reports of some of the Protestant bodies. The Congregationalists, for instance, had a "lean" financial year in 1901. The Episcopal Missionary Board had a deficit of $80,000, and the Baptist benevolent societies suffered a reduction of income—all this during the year of the most liberal benefactions to education and a year of great financial prosperity. But the Methodists collected a special "century" fund of $15,000,000 and the Southern Methodists $1,500,000.

These statistical and financial exhibits would not under all conditions be a fair index to the spiritual vitality of the churches. But they coincide now with the undoubted tendency toward a general falling away from such a reliance upon church membership by persons of upright lives as was common a generation ago. More and more of them look upon the church as one form of organized benevolence but less and less as an institution necessary to salvation. An organization like the Young Men's Christian Association takes the place in many lives that the church might take; and there is nothing to indicate any decline in correct living. Every indication, on the contrary, points to a more careful regard for the life that is, as signs multiply of a waning interest in the life to come.

A GREAT YEAR FOR EDUCATIONAL GIFTS.

THE record, kept by the editor of Appleton's Annual Encyclopedia, of gifts for educational purposes in the United States, including libraries, during the year 1901 shows that the sum reached more than 107 millions of dollars. During the last nine years the sums have been 29 millions, 32 millions, 32 millions (in 1896); 27 millions, 45 millions, 38 millions, 62 millions, 47 millions, and (in 1901) 107 millions. Although this last sum includes Mr. Carnegie's activity in "using cleverer men" (to quote from the epitaph, that he has proposed for himself), and Mr. Rockefeller's several large gifts as well as Mrs. Stanford's endowment of the Leland Stanford University, it shows the benevolent activity of a great many other persons; and, as careful as the compiler of these figures is, of course no compiler can hope to include every benefaction in so large a country as ours, for many small ones are not conspicuously reported. Since the beginning of this year Mr. Rockefeller has given $1,000,000 to the medical school of Harvard University, which, with the $1,000,000 given by Mr. J. P. Morgan last summer, will enable it to be most advantageously housed and equipped. Although the most richly endowed institution is the Leland Stanford University, with its thirty millions of property, the small colleges have not suffered neglect.

But it is noteworthy that the educational philanthropy of the last few years is directed into different fields from the fields of the Peabody and Slater funds. Dollar for dollar these two well-directed and well-administered trusts have probably been the means of lifting a greater number of neglected persons and communities into an intellectual life than any other benefactions ever made in the United States.

HOW BEST TO HELP CIVILIZATION

THE recent unparalleled endowment of educational institutions has turned men's thought to the whole subject how best to build up the people. Here are three views of three thoughtful college-trained men. One believes in directly helping capable young men; another in endowing scientific research without regard to individuals; and the third in bending all energy to the building-up of the rural public schools in order to reach the neglected masses.

(1) Most of the strongest men we have—the men who profit most by college training—are the sturdy fellows of limited opportunities who use their education not only as a means of the utmost development of their capacity, but also as a stepping stone to a higher social level or to a wider opportunity than they were born to. These are the men who as a rule become the strongest men in every kind of work, because from the beginning they struggle to rise. The best aid to education, therefore, is direct personal help given to young men of this class. Count the most efficient men of your acquaintance and see how many of them are of this kind.

(2) Our social and educational life is already so organized that the worthy individual is in some way provided for. Practically every ambitious lad in the land can somehow get training. But social and intellectual progress depends less upon individuals than upon discovery. Discovery, it is true, is the result of individual work, but a great discovery is of greater importance to society than the man who makes it. Even if an indefinite number of capable individuals never find opportunity—that is of little consequence in comparison with the failure to advance knowledge by research. The most hopeful method of helping mankind, then, is to endow research, especially in the sciences. The practical conquest over smallpox, for example, is one of the largest facts in human history. The conquest over all other diseases is possible. The application of electricity to industry is another example. Let us, then, maintain and endow exceptional men who give promise of discovery in any department of knowledge, especially in the sciences.

(3) Any civilization is as weak as its weakest part, especially a democratic civilization. So long as there are untrained masses in a democracy the whole fabric of society is weak, and it may at any turn of affairs be endangered. Many educational institutions as there are, it is yet true that vast masses of the people—millions and millions of them—have no opportunity to be trained. Especially is this true in rural communities, and more especially in the rural communities of the Southern States. The children of these communities are yet neglected. They are the forgotten people. It is of comparatively little importance to society that a few thou-

sand young men and women are receiving college education so long as millions, who are of as great natural capacity, are receiving no training at all. The best method of helping toward the building-up of the people, then, is to help the development of the public-school system in every community where it is not already adequately developed. The investment of hundreds of millions of dollars in better country schoolhouses, in their equipment and in better teachers, so that the rural public school may become the most efficient instrument for training hand and mind that has ever been devised—this is the task that awaits statesmen and philanthropists. There is no other task that can for a moment be compared with it in importance.

A LITTLE SERMON TO ALL GOOD PEOPLE

THIS plan for building up the people—by making the rural public school a training place for all the people and an intellectual centre of the community's life—there is room here for the most helpful work that any living man can do for society of the next generation. Mr. Branson's brief article in this magazine shows a way for the profitable exercise of all the missionary zeal, and for a profitable investment of all the surplus wealth, in the land. It strikes to the bottom of good citizenship; it is the true method of democratic development; it is the most direct means of social progress.

It is a melancholy reflection that much of the wealth and more of the unselfish zeal of well-disposed men who wish to serve their fellows is frittered away in a thousand little "reforms" which have no organic relation to life. Before a man becomes a "reformer," or "benefactor," or a "missionary,"—in a word, before he directs his labor or his wealth to philanthropic aims,—he ought to study the natural social development of our own people in its large tendencies. Then he could lay hold on some natural tendency, and his energy would the more surely be directed to the sound building-up of life, and not toward experiments that make mere patch-work on the map of our social activities. But, for that matter, the large social history of our own people is not yet written, in spite of the fact that it is the most interesting and most important chapter in all human history. When it is written, the kinds of work described in this magazine by Mr. Branson and by Mr. Tolman will form parts of the story. But the thousand and one little "reforms" that so many good people now busy themselves with will long have been forgotten, and doubtless a new crop of other little "reforms" will be in confusing bloom. One of the mysteries of the world is that so much of its benevolence should be divorced from large judgment.

COLLEGE PRESIDENTS FROM COLLEGE FACULTIES

IT was reported a little while ago that there was a demand for as many as fifty college presidents by colleges that either then had, or soon expected to have, their chief offices vacant. But the college presidency is hardly likely to become a profession for which men may deliberately train themselves, for such a post is naturally filled when the right man is found among those who know the particular conditions of the college. He should have, besides executive ability, a peculiar appreciation of college work such as few men outside of academic circles acquire. As a rule the successful presidents of well-established institutions are men who were previously identified with them. It was so with President Eliot, of Harvard, President Hadley, of Yale, President Patten, of Princeton, and it is so with the new presidents of Johns Hopkins and Columbia. Dr. Remsen was, from the founding of Johns Hopkins University, Professor of Chemistry, and he for several years had much to do with the administrative work of the institution. Dr. Butler had had, as Professor of Philosophy, a parallel experience at Columbia. The feeling at both these universities is that the natural and obvious choice of these distinguished men for the highest academic positions was the best possible choice

On February 22, the Johns Hopkins University appropriately celebrated its twenty-fifth birthday when President Remsen made his inaugural address. The president-emeritus, Dr. Gilman, has had an unparalleled career, for he has been at the head and has had a leading part in the founding of three great institutions—the University of California, Johns Hopkins University, and now the Carnegie Institution. In April, President Butler's inauguration will be fittingly celebrated at Columbia University.

THE HOPE OF SOUTH-AFRICAN PEACE

HOPES and even rumors of peace in South Africa come at more frequent intervals, but there is yet no certainty when the Boer leaders will give up their forlorn struggle. The British have recently been making better headway than they had made for a long time. But the area actually under British control is yet very small.

The recent effort of the Dutch Government looking toward peace was bound in the nature of things to fail. The Prime Minister of Holland, Dr. Kuyper, made a proposition to the English Government to give safe transport to the Boer leaders now in Holland to South Africa so that they might confer with the leaders there to see if terms of peace might not be arranged. The Holland proposal was not made with the admitted authority of the Boer leaders. For this reason as well as for the reason that the English naturally insist on peace dealings through their commander in South Africa, it came to naught.

The English Secretary in submitting a supplementary army estimate early in February said in the House of Commons that the war had cost to the end of the last fiscal year 315 millions of dollars. During this fiscal year 305 millions more will be required—a total till next summer of 620 millions of dollars. The expense of the war is now 22½ millions of dollars a month. The number of officers and men killed (4,940), died of disease (11,273), died of wounds and permanently retired as invalids is 24,299. At the first of the year there were 237,800 men in the field.

IS THE NEGRO MOVING NORTH?

THE publication of the population volume of the census, which contains many more details than the bulletins hitherto issued, has made known the facts about the northward migration of the colored population and started afresh the speculation whether the Negroes will ultimately be scattered over a large part of the Union. The principal facts shown are the continued increase of the colored population of Washington, one-third of the inhabitants being Negroes; the even more rapid increase in Philadelphia; a considerable increase in Baltimore, Louisville and St. Louis, all cities at no great distance from areas of large colored populations; but there has been an appreciable increase also in Chicago, Pittsburg and Indianapolis, which are further away. Contrariwise, certain Southern cities have a smaller Negro population than they had a decade ago, for example, Lynchburg, Richmond, Petersburg, Va., and Wilmington and Raleigh, N. C., and the increase in the cities further south, such as Charleston, Nashville, and Vicksburg has been small. The city that has the largest colored population is Washington; the next largest is Memphis.

But the decennial increase in the Northern cities (not reckoning Washington), is far too small to indicate a movement of this population northward of any particular significance. The best-trained and most intelligent of the class that enter domestic service come North for better wages (a cook in the South receives only from $4 to $6 a month), and an increasing but still small number who have achieved financial independence move North for obvious reasons. The movement of colored people northward from the Southern States is by no means as large as the movement of the whites. The mass of the blacks remains in the South and will always remain there, so far as any man now living can see. The slight check to their tendency to flock into the Southern cities is wholesome. Every year they occupy and own more Southern land, and this is the strongest tendency they show. There are certain areas in the Southern States which are fast coming to be occupied wholly by them.

COLLEGE ATHLETICS AND ATTENDANCE

THANKS to President Eliot, of Harvard, the delusion that victory in intercollegiate sports attracts students to the victorious colleges is shattered forever. In his latest annual report he presented an examination of the victories of Harvard, of Yale, and of Princeton over a period of years in connection with the increased attendance of students. He found that one bears no relation to the other. During long periods of athletic defeat Harvard grew in its number of students faster than either of the others. We see clearly then that although athletic contests make a great noise in the little college world, men who have the responsibility of educating their sons have not paid much attention to victories and defeats. It was a good illustration how a whoop sometimes is mistaken for a fact. We have more common sense than we thought we had.

ANGLOPHOBIA IN GERMANY

THE diplomacy of an autocrat is comparatively simple, for he need only watch foreign faces, and adjust his words accordingly; but the diplomacy of a responsible minister must be double-faced, for he need not only watch his adversaries, but also carefully observe his own constituents. Such seems to have been Mr. Chamberlain's predicament when he delivered his Edinburgh speech some time ago. All Europe may, in a sense, be called the adversary of Great Britain, and a diplomatic British minister might well feel it his duty to say, if not to do, whatever would be most agreeable and flattering to Europe. On the other hand, Mr. Chamberlain, not wholly diplomatic by nature, desired the compact support of the Tory majority, and, at Edinburgh, under the influence of a multitude of uplifted Tory faces, said with reference to the Boer war, that

"If Great Britain should be compelled to resort to measures of greater severity against an enemy guilty of frequent acts of treachery and breaches of the rules of civilized warfare, we could find precedents for anything we might do in the action of those nations who now criticize our 'barbarity' and 'cruelty,' but whose example in Poland, in the Caucasus, in Algeria, in Tongking, in Bosnia, in the Franco-German war,—whose example we have never even approached."

These few words contained an obvious, if not very serious, reflection upon the conduct of Russia, Austria, France, and Germany. Chamberlain had been insulted and irritated by the newspapers of those countries, and, forgetting that he was not a newspaper writer but a cabinet minister, he answered back. Of the four countries, Germany alone felt the sting. The reason for her susceptibility seems to have lain in her commercial rivalry with Great Britain. Everybody knows how great was the success achieved by her manufacturing efforts, and how the stamp "Made-in-Germany" was to be read on merchandise all over the world. But of late the period of over-production has brought great hardships with it. The Germans had been reckless in their enterprises; they had been imprudent in building undertakings, in promoting companies of various kinds, in speculative building, in endeavoring to make the production of iron and steel in the Empire exceed that of England, and they had, to use the homely phrase, "bitten off more than they could chew." The consequence has been that many people of moderate means have been pinched and many of the laboring class thrown out of employment, and that migration of wage-earners toward the place where they can earn their livelihood on the easiest terms, which had turned toward Germany, now takes men away from there.

Piqued, disappointed, and jealous, Germany saw Great Britain, with a most expensive war on her hands, enjoying great prosperity, and full of plans and endeavors as to the method of resisting, not German but American competition. Added to this, Prussia, if not the Empire, felt the prick in the large space given in English newspapers to the affair of the school children in Prussian Poland, where Prussia was trying by means of flogging and imprisonment to turn little Poles into little Prussians with very poor success. The English papers put German criticism of English deeds in the Transvaal in parallel column with narrative of Prussian deeds in Posen.

At the height of German animosity the Reichstag reassembled after the Christmas recess. The Chancellor, Count von Bülow, taking his cue from some remarks of Count Udo von Stolberg-Wernigerode on the Chi-li expedition in China,—in which the Count referred to a "foreign minister" who had insulted the German army,—warned Mr. Chamberlain, in a vigorous speech, to let foreign countries alone, least he "bite on granite."

In this speech what we have ventured to call the double-faced aspect of diplomacy took a further step. Under shadow of the Chancellor's example, Herr Liebermann von Sonnenberg, an Anti-Semitic Pan-German, arose and, after referring to Mr. Chamberlain as "the most accursed scoundrel on God's earth" (for which he was called to order), proceeded to say that "our veteran German soldiers must be protected against

comparison with gangs of robbers and packs of thieves, for that the greater part of the British Army is composed of such elements is evident," and that "in dealing with those who calumniate the German Fatherland we must not double our fists in our pockets, but must shake them before their insolent noses."

This was a step further than the Chancellor had wished to go, but the milk was spilt. A storm of protest blew over England. The London *Times* shared in the blast. It said:

"It is not the fact, as the Chancellor and Count Stolberg allege, that the Colonial Secretary compared the conduct of the German troops in 1870–71 to the conduct of our troops in the present war. Had he done so, he would, in the unanimous opinion of the people of this Empire, have been paying the German army the highest compliment in his power. . . . The German press chose to construe Mr. Chamberlain's words as a comparison between the past conduct of our soldiers in this war, and that of their countrymen in 1870–71. That was a misrepresentation not unflattering to the German army. We would do no race greater honor than by stating that their army had shown the same combination of heroism, of humanity, and of irreproachable moral conduct as our own. . . .

"Newspapers, as well as ministers, ought to exercise great circumspection when they are criticizing the troops of friendly Powers. But neither the Chancellor nor his interlocutor, who tells us that an insult to the German army is an insult to the German people, has a syllable of rebuke for the flood of obscene and unmanly falsehoods with which the German press has persistently sought to befoul the military honor of England. . . . That stream of insult has provoked deep and lasting indignation amongst all classes of the people which Count von Bülow might have done something to assuage. He has chosen to miss his opportunity and indirectly to pander to the popular German view that it is a slight upon Germans to compare their troops with those of England. He cannot be surprised if his conduct is resented by this people."

The London press in general expressed itself with less restraint, and Chamberlain contented himself with a brief rejoinder:

"What I have said I have said. I withdraw nothing; I qualify nothing; I defend nothing. As I read history no British minister has ever served his country faithfully and at the same time been popular abroad. I make allowance, therefore, for foreign criticism. I will not follow an example that has been set to me. I do not want to give lessons to a foreign minister, and I will not accept any at his hands. I am responsible only to my sovereign and my countrymen."

The episode, as far as the chief actors were concerned, ended there, but the *Times*, after the manner of huge bulk once set in motion, was unable to arrest its own momentum so quickly. It made an analytic study of the utterances of the German press on the subject of the Boer war, and gathered together all the insulting remarks, jokes and tirades which could be compressed into three columns. Some of the collection are hardly fit to repeat. The *Times* says that the newspapers in which they are printed are circulated all over Germany, but that "in England neither the railway companies nor Messrs. Smith & Sons, nor any private firm of newsvendors would tolerate such garbage in their bookstalls." The article ends:

"It is not with a light heart that we are driven to the conclusion that no other great civilized community has adopted the Boer cause with such a passion, not of sympathy misplaced, but at any rate genuine and generous, for the numerically weaker combatant, but of blind, unreasoning and unaccountable hatred for the British nation as the German people have done. But it is a conclusion to which any one who takes the trouble to examine the records must, we believe, inevitably be driven."

The lesser newspapers have had fiery articles, and have added as much as they could to the mutual ill-will between the nations. The serious aspect of the affair is that this animosity must be widespread and violent to be able to break down with so much ease all diplomatic suavity and political prudence. Official reticence has not yet recovered its equilibrium, for Lord Cranborne's statements in the House of Commons to the effect that Germany, just before the outbreak of the Spanish-American war, in conjunction with other European Powers, had supported the Austrian ambassador in his attempt to induce Great Britain to join a coalition unfriendly to the United States must be regarded as smoke from the same fire. Germany so considers those remarks; and, while denying their truth, asserts that they were uttered in order to spoil Prince Henry's holiday visit to the United States.

The lesson which the private citizen draws from this international backbiting is that it is well for every man, great or small, to keep his temper and to be polite

THE WONDERS OF THE AMERICAN DESERT

A DESCRIPTION OF ITS LOCATION, EXTENT AND DIVERSITY—A YET UNMAPPED REGION OF VAST AREA—THE BRILLIANT CLOUD EFFECTS —THE OLD TRAILS OF DEATH BECOME CROWDED THOROUGHFARES

BY

ROBERT T. HILL

OF THE UNITED STATES GEOGRAPHICAL SURVEY

Illustrated from photographs taken by the author

WE may speak of the "Arid West," the "Mountain States" or the "Cordilleran Province," but the vast region so named also includes a large area of desert as sterile as the Great Sahara itself. Yet owing to popular misconceptions the Great American Desert has been eliminated from the map, even before it has been mapped.

The present paper concerns only the Cordilleran region, and only one of the several specific units of that region—the desert provinces. Of the Great Plains, the Pacific States which border the Cordilleran region, or the magnificent forested and irrigable lands of the Cordilleran region, our story will have nothing more to say.

The North American Cordilleran region embraces the whole of our continent between the Great Plains and the Pacific north of the Isthmus of Tehuantepec. Of the grander scenery of the world none is more varied and beautiful than that of this region. From its northern end in far away Alaska to the jump-off of the Mexican Plateau of the South it presents a marvelous panorama of form, color and sculpture. A few of these features are familiar by name, but the glories of the Cordilleras as a whole have not been written, for even the professional geographer has but an incomplete idea of the region as an entirety, or of its parts and their relations. In fact much of the Cordilleran region is still so poorly mapped, that there is not yet a chart that gives a correct presentation of its great mountains and valleys. Most people, therefore, have but vague ideas of the Rocky Mountains, the Great Deserts, the Western and Eastern Sierra Madre, the California sierras, and the Coast ranges—any one of which is as extensive and unique a geographic unit as the great Appalachian region.

The Cordilleran region is likewise one of contrasting extremes. Within it are found every condition of climate, altitude, vegetation and productivity. The rainfall varies from the greatest in the United States (in Washington) to the least in the world (in the Death Valley and the Yuma Desert). Its altitudes range from the highest peaks on our continent (over 17,000 feet) to depressions 300 feet below sea level. Its vegetation presents the contrast of forests of the largest and most beautiful trees in the world and vast stretches of desert plain with the feeblest mantle of struggling bush and thorn. The region is the motherland of our longest rivers, the Missouri, the Columbia, the Colorado and the Rio Grande; yet it has a million square miles without as much running surface-water as the smallest New England township. It has in places mines which yield from a single acre more wealth than whole counties in many Eastern States, and it produces every mineral of the United States: yet again there are hundreds of miles of barren malpais as worthless as any ground the sun shines on. Some of its acres of agricultural soil are the most productive on earth, yielding under intensified and scientific culture the finest and most abundant crops of fruit, grain and tubers; and upon others even the cactus will not grow.

The forested Cordilleras occur in several distinct groups, which are so aligned as to constitute marginal chains of mountains bordering the Eastern and Pacific sides of the Cordilleran region, between which lie the

deserts and plateaus. The chief of these groups are, (1) the Montana and Colorado groups of New Mexico, and the Eastern Sierra Madre of Mexico, forming the Eastern ranges of the Cordilleran region; and (2) the Sierra Nevada, Cascade and Coast ranges of the extreme Western United States, and the Western Sierra Madre of Mexico, constituting the Pacific or Western ranges.

There are two provinces of high plateau, the Columbia of Idaho, and the Colorado of Utah and Northern Arizona. These border the interior side of the Eastern ranges. Though not strictly desert, yet, except for purposes of nomadic grazing, their economic possibilities are inferior to both the forested mountains and the barren desert.

The remainder of the Cordilleran region, including the vast stretches lying between the Sierra Nevada of California, and the Eastern Cordilleran ranges (Rocky Mountains) in the United States, and between the Pacific Ocean and the Eastern Sierra Madre of Mexico, constitutes the Great American Desert.

Of the total area of the Cordilleran province, three-eighths are forested mountains, one-eighth plateau, and one-half waterless, treeless, turfless mountain and valley desert. The deserts occur in Nevada, Utah, Eastern and Southern California, Arizona, New Mexico, and all of Texas west of the Pecos, 550,000 square miles. The American Desert is international, however, for in addition to the above area within the United States, it continues southward into Mexico, where it includes most of the States of Sonora, Chihuahua, Coahuila, San Luis Potosi and Sinaloa—another 500,000 square miles—making a total of 1,050,000 square miles which, although one-third the area, is as truly a desert in every natural sense as is the Sahara.

Few people know what a desert really is. A standard dictionary says a desert is "a region wholly or approximately without vegetation. Such regions are rainless, usually sandy, and commonly not habitable." If such regions *in extenso* exist upon the surface of the globe, they have not as yet been found, although there are such small spots within desert regions.

Sahara, the ideal and the largest of the deserts, embraces an area of 3,500,000 square miles. Though distinguished by aridity of climate, scarcity of running water, dryness of atmosphere, and a comparative paucity of vegetable and animal life, it has rainfall, streamways, vegetation and diversity of configuration. Its relief, instead of being "a boundless plain broken only by wavelike mounds of sand," varies in altitude from 100 feet below to some 8,000 feet above sea level, and besides sand dunes and plains, contains vast tracts of loose stones and pebbles, ranges of hills and valleys, rocky plateaus and water courses, very similar to the *arroyos* of our own arid West, and extensive areas of arable land. Botanically it is characterized by stiff shrubby plants, similar to those of our own deserts. Furthermore the Sahara, far from being uninhabited, has a population of 2,500,000 people or an average of seven-tenths of one person to the square mile.

The North American deserts possess all the physiographic, geologic and climatic elements which distinguish the Sahara. The chief difference between the two regions is the relatively larger area of the Sahara, the arrangement of the topographic units and the occurrence in the Great American Desert of a wealth of mineral resources which the Sahara does not possess. Furthermore, while the possibilities of the Sahara have not as yet been tested by Yankee enterprise, the Great American Desert is the site of one of its most remarkable and successful conquests. Through the application of modern mechanical agencies by American energy and brain, its wastes have become inhabited by an intelligent and progressive people, and its arid hills and plains made to yield a wealth twice as much per capita as that of any other portion of the United States.

Through the area mentioned, the Great American Desert stretches southward far into the Tropics, a marvelous country, unique in every feature of landscape and vegetation.

In its entirety (with a few exceptional forested summits) this desert province is one of barren, stony mountain ranges, separated by equally barren stretches of desert plain, an aggregation of elongated arid plains and lower mountain ranges, which mostly follow the axial line of the Cordilleras. The individual deserts have many names, and each differs from the others in some minor aspect.

From a technical point of view a desert in its ultimate analysis is a region in which

the rainfall is insufficient to produce run-off. The light rainfall, striking the heated rock surfaces and sandy soils, is soon evaporated or drunk in: even the large bodies of water which may start down the mountain sides as roaring torrents usually die out at the margins of the plains. These waters are highly charged with mineral salts derived from the heated rock surfaces, and these salts are readily redeposited upon the surface or in the interstices of the permeable sands. The torrents locally transport the rock debris—bowlders, pebbles and powder—from one locality

to another, but only for short distances; and hence the desert plains are usually composed of the debris of the adjacent mountains, which in more humid regions of ample run-off would have been carried to the sea. The expansion and contraction from the daily temperature causes the desert rocks to fracture *in situ* into the desert waste. This is distributed by wind and torrent, and hence the features of the desert are largely air-made as well as water-wrought.

The scarcity of moisture results in the ence of vegetation of the root-twining, soil-gathering and soil-making type that distinguishes the humid region. Every plant and species attests the aridity of the country. Exactly as in the Sahara, these plants are thorny, coriaceous bushes and shrubs of the cactus, aloe and acacia families, adapted to withstand their droughty environment, and to defend themselves from attack by man or beast.

Paucity of moisture is also a factor in assisting the segregation of metallic minerals in the mountain rocks by trickling circulation and of the mineral salts upon the plains, which would be carried to the sea as solutions in regions of copious rainfall.

Physiographically there are two sub-provinces of the Great American Desert, lying to the east and to the west of the Western Sierra Madre and Colorado Plateau respectively. The westernmost of these may be termed the Nevadan and the eastern the Chihuahuan. The Western, or Nevadan, Desert occupies much of the area of Utah, Nevada, Mexico, Southern and Eastern California in the United States, and the States of Sonora and Sinaloa in Mexico. The Chihuahuan Desert occupies the vast area of country lying between the eastern and western Sierra Madre of Mexico and their northern continuation into Southern New Mexico and Texas west of the Pecos, and is the so-called Mexican Plateau.

The Nevadan deserts are again subdivisible into northern and southern sub-provinces, the Great Basin and Sonoran respectively, the first including Nevada, Eastern California, Utah, and part of Northern Arizona; the second, the country to the South.

The Great Basin Desert is marked by wide flatness, and is largely a region of ancient lake beds. Its surfaces are in many instances what the geologists term constructional, and its flora is mostly sage brush and grease wood; its agricultural products cereals and tubers; and its minerals gold, silver and copper. The Sonoran Desert is of a more complicated geological type, and instead of being land-locked is bordered on one side by the Pacific Ocean. Some of its surfaces are also the result of what geologists term destructional processes. Its floral types are the saguara, the palo verde and the catsclaw. Its sparse agricultural products are fruit and wheat, its mineral resources gold and copper.

A DESERT VIEW IN SONORA

The Chihuahuan Desert, marked by parallel plains and ranges, is a relatively higher region; its features are a combination of destructional and constructional processes. Its floral types are the maguey cactus and yucca; its chief agricultural product maize (corn) and its principal mineral product silver.

In the desert it may be truly said that the heavens declare the glory of God and the firmament showeth His handiwork. It is a strange land of paradox, where each rock and tree and flower and river reverses conventional tenets and laws and conditions for Anglo-Saxon environment, as founded upon ideas preconceived by thousands of years of ancestral experience. Nowhere else does the vaulted arch express such unspeakable grandeur or the firmament reveal such mighty panoramas. There the vision penetrates the infinite distances of crystal air and brings out details of landscape forty, fifty, aye, a hundred and fifty miles away, which cannot be seen in the humid regions at all. I have seen mountain peaks a hundred and fifty miles distant.

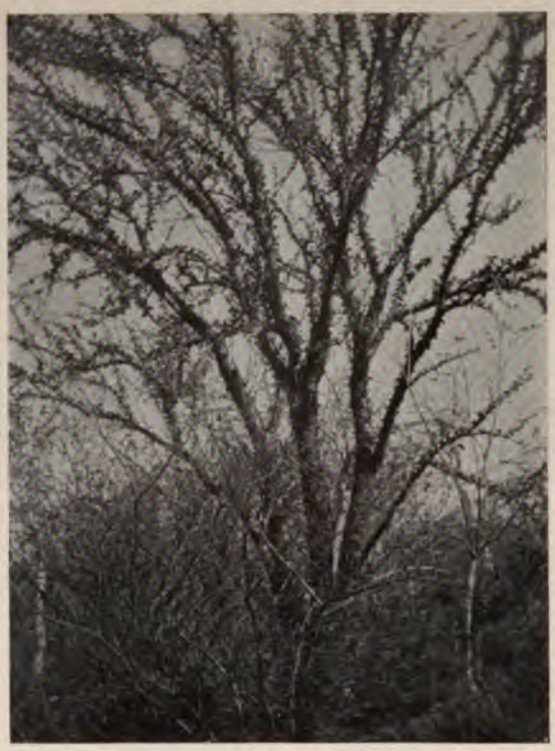
While the desert plains may be extensive, they also have many phases of variation. There are the alkali plains, white crystal patches of saline efflorescence which vegetation abhors and vast plains of "doby" (adobe) — brownish chocolate clay soils through which here and there are cut the deep channels of streamless streams. There are the dreary "tabosa" flats covered by headlike bunches of a woody grass, abhorred by animals and useless to man, through which one may travel for days. The great white gypsum desert of the Tularosa Valley of New Mexico is one of the most wondrous of all the desert plains. To the eye it is a veritable sea of purest granular snow, marked with wind waves and ripples like the Tropic Ocean, with billows and troughs. Yet it is not snowlike in its torrid heat, which burns and

A YUCCA TREE

IN THE NOONDAY GLARE

thirsts more than man can tell. In some places there are extensive lakes of crystalline salt which the desert inhabitant uses for herd and flock. Sometimes there are stretches of dreary brown sand hills, great billows gathered around the protecting roots of the thorny mesquite, the particles blowing with each breath of wind, ever seeking a resting place, though seldom finding one.

The half cannot be told of the many other aberrant features of the Great American Desert, like Death Valley with which no spot in Sahara can compare for sterility and desolation; the great "medanos" or white sand dunes just south of El Paso, each as high as the National Capitol, which creep from place to place over the desert plain; the vast plains of malpais in New Mexico with their burning, cutting, black, waterless surfaces of lava; the "flour dust" deserts of Jimenez and Arizona and Sonora, where the traveler is choked with clouds of chalk-white powder; the Crow Flat with its glare that blinds, the Jornado del Muerto, with its hundred whirlwinds, the saguara deserts of Sonora, where for hundreds of miles grows no blade of grass, or many other spots which are apparently a mockery of nature.



GREAT OCATILLA

The deserts are enclosed in a setting of wondrous masses of mountain rock—the survival of the hardest, the degradation of which

ON A TABOSA DESERT, SALT FLAT, TEXAS

VAST SHEETS OF MALPAIS, NEW MEXICO

has made the plains—standing as a frame upon which nature hangs the marvelous drapery of her clouds and shadows, which displays the moods and colors of indescribable scenic splendor. Sometimes these mountains are narrow ridges hundreds of miles in length, the intaglioed scarps of which are delicately traced and carved by great ravines. Again solitary peaks rise in lonely grandeur as symmetrical in contour as if turned from a lathe. Some mountains are necks of old volcanoes—long quiescent; others, the sediments of the ocean, now upheaved and distorted into forms of the land.

FROM THE SUMMIT OF SANTA HELENA

Ten miles north of Rio-Grande. Plateau with Karrenfelder surface is in the foreground. Quicksilver mountain is at the extreme right. Fault Cliff on the right. The valley of Terlinga Creek is in the foreground.

Who can describe the vagaries of the aberrant vegetation that finds sustenance in this stony soil of the foothills—the yucca, sotol, lecheguilla, palmillia and maguey—all of which, armed with prickling points, vie with one another in sending their plumed stalks into the air, presumably to protect the delicate flowery parts from animal depredation? Then what queer monstrosities are the cactaceous forms which rise in great clumps above the plain, the saguara of Arizona like great organ pipes, the choya of New Mexico, with its spiny joints ever ready to attach themselves to the passing traveler, and the ocatilla with its wavy, snake-like arms? Again for miles the eye sees, as far as it can reach, only the gray carpet of greasewood and sage, while, strange to say, in places streaks of grassy meadows add an emerald patch to the gray foliage.

THE DESERT IN SAN LUIS POTOSI, MEXICO

The clouds are the most wonderful manifestations of the desert heavens. The forms of vaporous atmosphere are numerous. In the morning they fill the valleys with snow white vapor, which at midday rises and gathers into solitary fluffs sailing majestically along like great icebergs in a sea of azure ether, or again breaking into small bunches like flocks of sheep. Frequently from one little handful of cloud surrounded by golden sunshine, a rib-boned spray of rainfall may be seen dropping upon some lonely spot. Towards night they gather in rolling banks and settle upon the mountain tops, rapturously lingering near the horizon, where they are painted by the setting sun in floods of glorious gold and violet.

Sometimes showers freshen the desert. These are occasionally of sufficient volume to dampen the earth and vegetation, and an awakening of life ensues which is most remarkable. From every shrub and cactus comes a burst of song from birds ordinarily unnoticed. Rabbits creep out and browse, coyotes give tongue in chase of prey. Vegetation seems to awaken instantaneously, Plants which before were dry and dust-covered unfold into broad areas of vivid green. Coriaceous ferns,

THE GREAT WHITE GYP
Seen from a point o

ordinarily lying like dead leaves among the stones, unroll and wave their fronds in the freshened air. From the inconspicuous flowers of the many thorny shrubs of the acacia and yucca tribe the air is laden with perfume.

It would seem paradoxical to speak of the desert in bloom, but the human senses of sight and smell can be regaled by no more pleasant experience than the delicate odors and sweeps of color that sometimes follow an unusual rainfall. Sweeter than the dewy jessamine is the scent of the yellow catsclaw; more delicate than mignonette is the panule of the mesquite. An Emperor never had more royal plumes than the gigantic stalks of the sotol. Streamers of yellow and purple mark for miles the paths of the cloudburst or stripes of new green grass the ensuing sub-irrigation of the streamways.

AT THE EDGE OF THE MALPAIS SHEET, NEW MEXICO

Like a dainty pencil-line drawn across the sheet of desert, the trails may be seen for miles and miles. These, originally made by the wild Comanche and Apache, lead in long tangents from water-hole to water-hole, cutting paths of deep-worn ruts. Were it not for these trails connecting the various water places the desert probably would be impassable, for the priceless water is usually concealed in spots where least suspected. These water holes were discovered by the aborigines long

ESERT OF NEW MEXICO
een miles distant

before the ranchman and settler came or the army wagons and cavalry troops deepened the impress of the trails.

What stories of death and pain, thirst and starvation could be told by these old trails! What infinite agony they must have caused those who first marked them out afoot before the white man came! We know that as early as 1528 many of them existed, for in that year Cabeza de Vaca and his three shipwrecked survivors of the Navaez Expedition followed these paths from water-hole to water-hole across our southern border, and that modern commerce and migration still use these, the oldest and most stable monuments of the desert.

In the desert water is king, and woe to him who tries to defy, and happy is he who obtains its favor. Without its countenance priceless ore is but as dross, and fertile soils are as worthless ashes. Upon the desert plains many men and cattle have died for the want of a drink of water, which millions could not buy. Water is not only the king of the desert, but its despot. It smiles at the millions of acres of land owned by a certain university as a part of its endowment which is still ungraced by its favor. It laughs at the waterless miles upon which the United States invites settlement under the homestead

OCATILLA ON THE DESERT

SAGUARA AND CHOYA

laws; it defies those who would take the rich gold from the placers of the deserts of Sonora and Arizona, where the gold would remain forever without its precious favor.

Like the Sahara, the Great American Desert is superficially waterless. Its plains are usually barren of surface water save for an exceptional saline lagoon. A few brooks, streams or rivers arise within its larger mountain ranges, but no water ever runs off its surface to the sea. Even the great floods of water which sometimes burst from an erratic cloud with devastating effect are rapidly swallowed up by the sands or evaporated by sun and wind. It is true that there are two long rivers comparable to the Nile of the Sahara—the Colorado and the Rio Grande—which rise in the higher forested mountainous border lands and flow into and across the deserts like great canals, without gathering contributary drainage from them, losing volume in fact from absorption and evapora-

THE SWEEP OF THE DES

tion in the desert portions of their courses. These are rivers born of the mountains, however, and not of the deserts.

Upon the area of the Great American Desert the maximum rainfall is less than fifteen inches per annum, and does not average more than ten inches. In places such as Death Valley and the Yuma Desert it is less than five inches, these two spots being perhaps the driest in the known world. Deducting from this maximum of fifteen inches sixty per cent. of its effectiveness, due to loss through evaporation, the actual rain value is only six inches per annum, less than the amount falling in the two crop-growing months of May and June in the Eastern States, and less than one-half the quantity that fell in September, 1901, in a single twenty-four hours at Galveston, Texas. To this great natural fact the desert is resigned,

SOTOL

that within its area the land with a few exceptions, not amounting to three per cent., is

) THE HEAVENS

CACTUS GROWTH, SONORA

permanently and hopelessly dry, and even the most sanguine cannot refute this fact.

The public hardly hears of the horrors of any desert locality before men of nerve and grit conceive methods of making it productive. Powell risked life to explore the canyons of the Colorado; railroad engineers are now figuring on constructing a track of steel along its precipitous chasms. Fifteen years ago Miles and his soldiers were chasing the Apache out of Southern Arizona. Their stories of thirst, starvation and suffering still ring in the ears of the public. Today the home of the Apache is the site of a prosperity not often witnessed. From the top of Huachucha Mountain, whence Geronimo sent up his signal smokes, you can see three of the most profitable mining camps in the Southwest, and where he hid in Bisbee Canyon you can sit in a club, read the latest literature, and eat and drink all that the world affords. While the Eastern people are still telling of the bones which strew Death Valley, a commercial company is extracting great profits from its mines of borax. In the clubs on Fifth Avenue, New York, Yuma is still talked of as the place so hot that the soldiers who went from there to Hades called for blankets; yet near Yuma, with the aid of capital,

TWILIGHT ON THE DESERT, ELEPHANT MESA AND WHIRLWIND PLATEAU, TEXAS

IN THE WESTERN SIERRA MADRE MOUNTAINS

Near Carmen, Chihuahua

ditches are being dug which will reclaim 100,000 acres of desert and convert it into orange gardens.

Much is also written nowadays concerning desert reclamation which is misleading, because it creates the erroneous opinion that the chief possibilities of the desert are agricultural and that a very large proportion of it can be cultivated by irrigation. Furthermore, it leaves the impression that the desert is still an unproductive waste from which no value can be extracted save by a Government appropriation. On the other hand the desert to a large extent has been reclaimed already by an energetic people who scorn the idea that either they or their country are in public need. With a wealth far greater than that of any other portion of the Union, amounting to about $2,000 per capita, and a progressive population which has increased far above the average of the United States, neither these people nor their country are objects of commiseration. If reclamation means the further development of many resources still inert, it is not to be denied that the desert still presents vast fields for investment and development, capable of greater production and of being made habitable in other places now unpopulated; but its reclamation in the future will be primarily industrial. Where mines are to be opened, railways to centre, or new industries to be developed, villages and cities will spring up and the population through sheer grit and enterprise will overcome the apparently adverse environment by mechanical conquest.

It is the object of this article not to prophesy the future of the desert, but to present a picture of its present conditions and to tell how it has already been reclaimed through the achievement of the railroad engineer, of the mine manager and the borer of artesian wells, backed by the general activity and perseverance which inspires the men of that region to do things. These men, with their mechanical appliances, railway locomotives, artesian well rigs, steam hoists, deep-acting pumps, air compressors and the diamond drill, have been the chief factors which have caused the existence in the desert of a lively and modern civilization. Their conquests will be told in the next number of this magazine.

MORNING ON THE DESERT. NINE POINTS MESA, SHOWING MORNING CLOUD EFFECTS

THE YERKES OBSERVATORY, WILLIAMS BAY, WISCONSIN

A NIGHT'S WORK OF AN ASTRONOMER

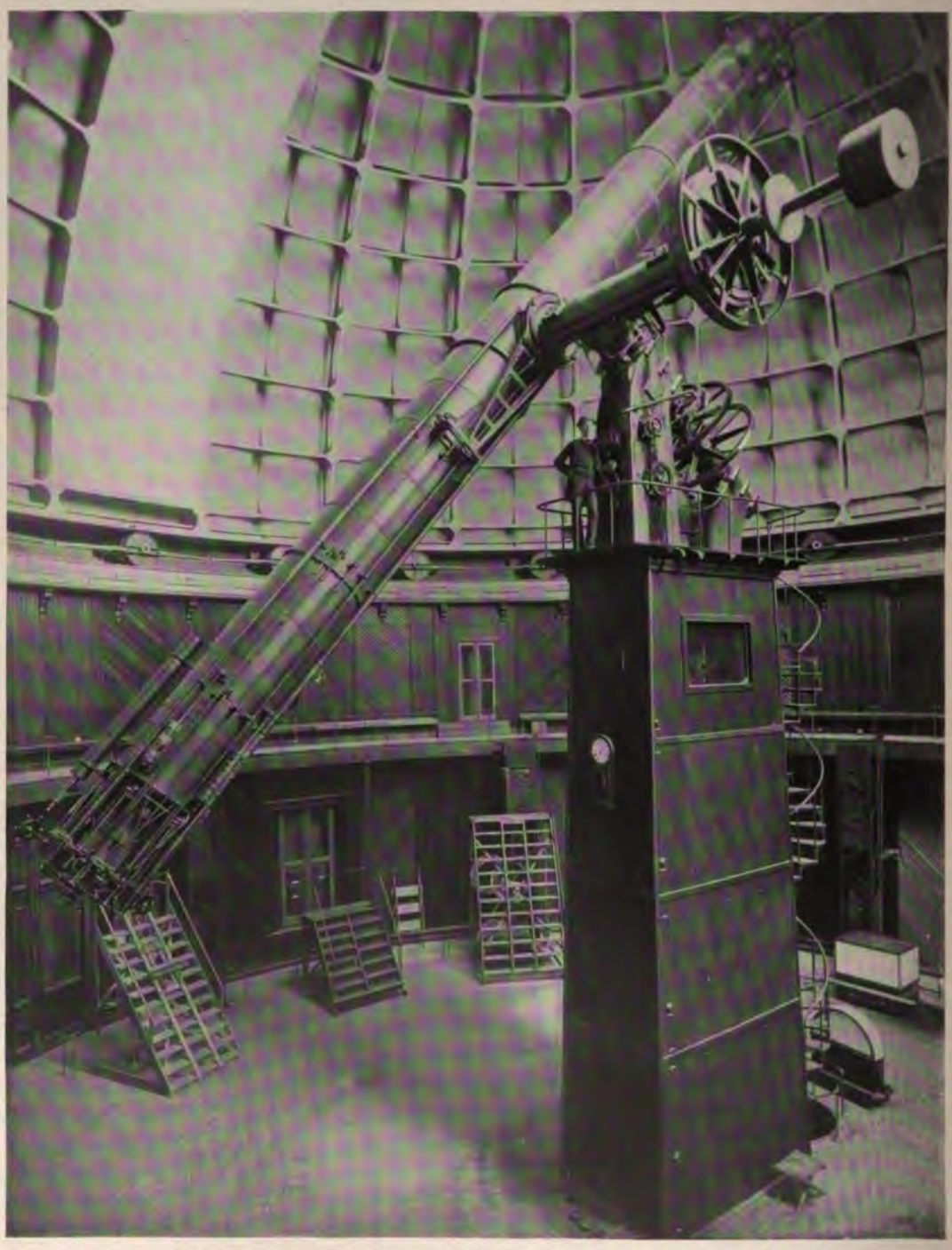
BY

DR. T. J. J. SEE

THE science of the stars is one of the most fascinating and at the same time one of the most exacting and laborious of all the professions. It is historically the oldest of the sciences, for there never has been an age of civilization in which there were not men devoted to the study of the skies. It is said that of all professional men the astronomer stands first in the tables of longevity. Many of them have attained the Biblical allotment of threescore and ten, and even reached more nearly to fourscore years. In some remarkable instances a period of over ninety years has been attained. This has led to the somewhat hasty conclusion that the study of the heavens in the solitude of night is quiet, easy and free from strain on the nerves. But those who have had practical experience in observing the stars, especially in the latter half of the night when the human system from the inherited tendency of ages is most in need of rest, and the vital forces of the physical organization are at their lowest ebb, will regard this view as an amusing fiction. The reputed longevity of astronomers is to be explained rather by a process of natural selection, which draws the stronger individuals to the sublime science of the heavens. When one recalls that from the days of Plato astronomy has been acknowledged to be the most mathematical of the physical sciences, and that the faculty of mind necessary for its successful cultivation is admittedly the highest and rarest gift of the race (the venerable A. R. Wallace and other naturalists seem to have proved this conclusively), it is plain that the longevity of the astronomer is rather an indication of the strength of those who choose the profession than a measure of its quietude and ease.

In common with most of my professional associates, I regard astronomy as one of the most exacting of the professions, requiring mental endowments of a high order and severe intellectual and bodily exertion. Yet it is the most sublime and beautiful of all the occupations of men, supplying to those who are devoted to it a source of endless delight, no less than a field of unlimited study, activity and usefulness.

The day's (or night's) work of an astrono-



THE FAMOUS 36-INCH REFRACTOR OF THE LICK OBSERVATORY

THE DOME OF THE LOWELL OBSERVATORY AT TACUBAYA, MEXICO

The object glass appears in the opening of the shutters. The small house at the left is that of the guard Werro who watched the property in the absence of the astronomers

mer varies according to his station in the world. Some astronomers are almost pure mathematicians, who spend their time in computations and methods of mathematical analysis, by which great discoveries are made and the places of the heavenly bodies determined through past and future centuries. Their study constitutes the science of celestial mechanics, the highest and most difficult branch of the profession, and is little known in a popular way. These mathematical astronomers, of whom Newton and Laplace, Newcomb and Hill, Darwin and Poincaré, may be cited as examples, use mathematical and other books, develop new methods for solving abstruse problems and consult in libraries the observations of others, but in general they do not themselves observe with a telescope. Thus they can hardly be said to be astronomers in the usual sense of the term, but are rather mathematicians and theorists, doing their principal work in the study and mainly by day. The larger and more general class of astronomers must bring to the observatory profound learning in mathematics and physics and practical talent for observing with a telescope; and their observations and measurements among the stars give us the foundation of all our knowledge of the universe.

As an illustration of a night's work of an astronomer it will perhaps be permissible to draw upon my own experience at the Lowell Observatory in the city of Mexico during the early months of 1897. This well-known institution is a private observatory, now maintained at Flagstaff, Arizona, by Mr. Percival Lowell of Boston, who has devoted much of his time to the study of the planets. It is equipped with a superb Clark refracting telescope of 24 inches aperture and 31 feet focal length. The lens is a very fine one, and is in fact the last objective made by the late Mr. Alvan G. Clark, of Cambridgeport, Mass. The glass is almost as devoid of color as a crystal and it defines beautifully. Though not the largest instrument in the world, the Lowell telescope is one of the most powerful; and in its present situation, on a high and dry tableland of Arizona, it is one of the foremost of modern telescopes. The climate of Arizona is clear and dry, and the station

THE ASTRONOMER AT WORK

At the United States Naval Observatory

of Flagstaff is about 7,000 feet above the sea level; so that the lower stratum of air, more than a mile deep, which is the part of the earth's atmosphere most detrimental to astronomical work, is left behind. The stillness of the air enables the observer to watch the planets and the stars to great advantage, and the result is discoveries of faint and difficult objects which cannot be seen elsewhere. Mr. Lowell built the observatory for active work, not for artistic effect. The telescope is therefore housed in a simple wooden building covered with canvas and a tin roof.

LICK OBSERVATORY, MOUNT HAMILTON, CALIFORNIA
4,200 feet above sea level

It was taken down at Flagstaff, Arizona, in November, 1896, and shipped to the city of Mexico and put up late in the following month. The transition was made with such rapidity that at the end of six weeks from the time we quit work in Arizona we were again in readiness to observe the stars in a more southern latitude. It need not be supposed that this rapid transition was accomplished without great difficulties. Besides the official and diplomatic technicalities attendant upon settling in a foreign land, the mechanical problems presented considerable embarrassment. Such a piece of engineering would have been troublesome anywhere at any time, but in Mexico the labor of rebuilding was greatly augmented by the unskilled character of the peon laborers, who have little industry and scarcely any knowledge of the principles of building and mechanical engineering. Under the circumstances the direction and a large part of the labor of remounting the telescope, which is very heavy, and of raising the dome, was necessarily thrown upon the astronomers, who thus assumed the rôle of engineers in addition to their duties as observers.

Notwithstanding these obstacles the whole observatory was soon in working order, and

Mr. Lowell and his staff immediately resumed active work on Venus, Mercury, Mars, Jupiter's satellites and the southern double stars —the latter being looked after by me and my assistant, Mr. W. A. Cogshall, now of the Kirkwood Observatory at the University of Indiana. Mr. Lowell lived at the Iturbide Hotel in the City of Mexico, and with some of his assistants usually appeared at the observatory about nine o'clock in the forenoon; observed actively on Mercury and Venus till one o'clock; then retired an hour for lunch at a neighboring restaurant; returned and followed the planets for several hours till near sunset, when he usually went into the city for dinner. Soon afterwards he returned for the observations on Mars, which were considered the most pressing, and which occupied the first hours of the early evening till ten or eleven o'clock.

I lived near by in Tacubaya, and was usually present at the observatory at least sixteen hours out of the twenty-four. Occasionally about eight o'clock in the evening Mr. Lowell would surrender the telescope for a half-hour or three-quarters in order to take dinner. To save time at an hour of the night which afforded the best seeing, food was usually brought from the City of Mexico or from Tacubaya. During these rare and much-coveted moments of the evening I examined most of the brighter southern stars then above the horizon, and had the good fortune to discover a number of important double and triple systems. Near the middle of the night we again had a short time for the stars, between the closing of the work on Mars at ten o'clock and the resumption of work on Jupiter's satellites, which usually began at one o'clock and lasted for two hours; so that at three o'clock we took up the last part of our sweeps over the southern constellations and continued observing until the stars faded away in the morning light. Our work was thus considerably scattered through the night, usually broken into pieces of two or three hours' duration; but it was prosecuted most diligently in every spare moment. In our zeal for discovering new double stars sleep was neglected or forgotten, and for at least six weeks in February and March, 1897, we had practically no rest on any night. This was in the dry season, and the sky was always clear and the seeing generally good. The observatory was soon to be removed back to Arizona, and hence we spent every available moment in the most rapid sweeping possible. My assistant stood at my side and pointed the telescope by means of the finder, which serves to "sight" the large instrument, while the observer centred his whole attention upon the celestial objects which came into the field of view.

In five seconds a star would be examined and pronounced "double" or "single" and the "next" called for. When we found a double star about two minutes were required to measure it; and then our sweep was again resumed. Pursuing this method of sweeping, we were enabled to study as many as one thousand of the brighter stars in a single night. Between sunset and sunrise we frequently found and measured no less than fifty or sixty systems, many of which were new. Others had been seen by the earlier southern observers, notably by Sir John Herschel while at the Cape of Good Hope between the years 1834 and 1838. In our explorations the discovery and measurement of new systems was of the first importance; yet the remeasurement of the stellar systems discovered by our predecessors in the southern hemisphere was considered scarcely less desirable.

The result of our studies at Mexico was the discovery and measurement of some of the most brilliant and important double stars in the heavens. It seems probable that our labors in that region will some day serve as a point of departure for future investigators. When many years have elapsed, the importance of the work of the Lowell Observatory at the City of Mexico will naturally be enhanced by the changes which will then have taken place. It is perhaps not too much to suppose that future observers will look back to the epoch when we were at work in Tacubaya in much the same way as we now look back to the epoch of Sir John Herschel's explorations at the Cape of Good Hope.

A sense of the importance and dignity attaching to our exertions proved a considerable source of inspiration in all our efforts; and the discovery of a few brilliant or extremely remarkable double stars just before the coming of day often compensated for the fatigues of a whole night. More than once after a tiresome vigil we departed from the

observatory just as the Southern Cross, standing erect over the mountains to the south, was fading away in the morning light; and our journey homeward was frequently made lively and cheerful by recollections of the fine discoveries it had been our good fortune to make.

It is feelings such as these which sustain the astronomer and enable him to triumph over drowsiness and all other obstacles, and to be cheerful even in the midst of discomfort and physical exhaustion and pain. In spite of all the laborious exertions connected with the prosecution of the science, the study of the stars is always an inspiration to the born astronomer. The grandeur and sublimity of the mental occupation probably diminishes his suffering and prolongs his life. His mind is concentrated upon the wonders of the heavens, and, like Archimedes of Syracuse, he has no thought of his own life, if only his contemplations be not disturbed.

A NEW INDIAN POLICY

A SUMMARY REVIEW OF THE RESULTS OF OUR KEEPING THE INDIAN TOO LONG IN A WRONG SORT OF DEPENDENCE—THE MISTAKES OF EDUCATIONAL EFFORTS

BY

WILLIAM A. JONES

UNITED STATES INDIAN COMMISSIONER

THE friends of the American Indian, and he has a vast number, have been studying patiently and seriously how to overcome the obstacles which stand in the way of his independence and self-support. The indiscriminate issue of rations is an effectual barrier to civilization; the periodical distribution of large sums of money is demoralizing in the extreme; and the general leasing of allotments, instead of benefiting the Indians as originally intended, only contributes to their demoralization.

Another obstacle is education. It is to be distinctly understood that it is not meant by this to condemn education in the abstract. Far from it. Its advantages are too many and too apparent to need any demonstration. Neither is it meant as a criticism upon the conduct or management of any particular school or schools now in operation. What I mean is that the present Indian educational system taken as a whole is not calculated to produce the results anticipated when it was begun.

There are in operation at the present time one hundred and thirteen boarding schools, with an average attendance of something over sixteen thousand pupils ranging from five to twenty-one years old. These pupils are gathered from the cabin, the wick-i-up and the tepee. Partly by cajolery and partly by threats, partly by bribery and partly by fraud, partly by persuasion and partly by force, they are induced to leave their kindred to enter these schools and take upon themselves the outward semblance of civilized life. They are chosen not on account of any particular merit of their own, not by reason of mental fitness, but solely because they have Indian blood in their veins. Without any previous training, without any preparation whatever, they are transported to the schools, sometimes thousands of miles away, with no expense to themselves or their people. The Indian youth finds himself at once, as if by magic, translated from a state of poverty to one of affluence. He is well fed and clothed and lodged. Books and all the accessories of learning are given him, and teachers are provided to instruct him. He is educated both in the industrial and the liberal arts. Beyond "the three r's" he is instructed in geography, grammar and history; he is taught drawing, algebra, geometry, music, astronomy, physiology, botany and entomology. Matrons wait on him while he is well and physicians and nurses tend him when he is sick. A steam laundry does his washing and the latest mod-

ern appliances do his cooking. A library affords him relaxation for his leisure hours, athletic sports and the gymnasium furnish him with exercise and recreation, while music entertains him in the evening. He has hot and cold baths, steam heat and electric light and all the modern conveniences. The child of the wigwam becomes a modern Aladdin, who has only to rub the Government lamp to gratify his desires.

He remains until his education is finished, when he is returned to his home, which by contrast must seem squalid indeed; to the parents whom his education must make it impossible to honor; and is left to make his way against the ignorance and bigotry of his tribe. Is it any wonder he fails? Is it surprising if he lapses into barbarism? Not having earned his education, it is not appreciated. It is looked upon as a right and not as a privilege; it is accepted as a favor to the Government and not to the recipient; and the almost inevitable tendency is to encourage dependence, foster pride and create a spirit of arrogance and selfishness. The testimony on this point of those closely connected with the Indian employees of the service would be interesting.

It is not denied that some good flows from this system. It would be singular if there did not after all the effort that has been made and the money that has been lavished. In the last twenty years fully forty-five millions of dollars have been spent by the Government alone for the education of Indian pupils, and it is a liberal estimate to put the number of those so educated at not over twenty-five thousand. If the present rate is continued for another twenty years, it will take over seventy millions more.

But while it is not denied that the system has produced some good results, it is seriously questioned whether it is calculated to accomplish the great end in view, which is not so much the education of the individual as the uplifting of the race. It is contended, and with some reason, that with the same effort and much less expenditure, applied locally or to the family circle, far greater results could have been obtained.

On the other hand, it is said that the stream of returning pupils carries with it the refining influence of the schools, and operates to elevate the people. Doubtless this is true of individual cases, and it may have some faint influence on the tribes. But will it ever sufficiently leaven the entire mass? It is doubtful. What then shall be done?

It may be well first to take a glance at what has been done. For about a generation the Government has been taking a very active interest in the welfare of the Indian. In that time he has been located on reservations and fed and clothed; he has been supplied lavishly with utensils and means to earn his living, with materials for his dwelling and articles to furnish it; his children have been educated and money has been paid him; farmers and mechanics have been supplied him; and he has received aid in a multitude of different ways. In the last thirty-three years over two hundred and forty millions of dollars have been spent upon an Indian population not exceeding one hundred and eighty thousand; enough if equitably divided to build each one a house suitable to his condition and furnish it throughout; to fence his land and build him a barn; to buy him a wagon and team and harness; to furnish him plows and other implements necessary to cultivate the ground; and to give him something besides to embellish and beautify his home. It is not pretended that this amount is exact, but it is sufficiently so for the purposes of this discussion.

What is his condition today? He is still on his reservation; he is still being fed; his children are still being educated and money is still being paid him; he is still dependent upon the Government for existence; he is little if any nearer the goal of independence than he was thirty years ago; and if the present policy is continued he will get little if any nearer in thirty years to come. It is not denied that under this, as under the school system, there has been some progress, but it has not been commensurate with the money spent and effort made.

Certainly it is time to make a move toward terminating the guardianship which has so long been exercised over the Indians and putting them upon an equal footing with the white man so far as their relations with the Government are concerned. Under the present system the Indian ward never attains his majority. The guardianship goes on in an unbroken line from father to son, and generation after generation the Indian lives and dies a ward.

To begin at the beginning then, it is freely admitted that education is essential. But it must be remembered that there is a vital difference between white and Indian education. When a white youth goes away to school or college his moral character and habits are already formed and well defined. From his earliest moments he has imbibed those elements of civilization which, developing as he grows up, distinguish him from the savage. He goes to school not to acquire a moral character but to prepare himself for some business or profession by which he can make his way in after life.

With the Indian youth it is different. Born a savage and raised in an atmosphere of superstition and ignorance, his moral character has yet to be formed. He must be taught to lay aside his savage customs like a garment and take upon himself the habits of civilized life.

In a word, the primary object of a white school is to educate the mind, the primary essential of Indian education is to enlighten the soul. Under our system of Government the latter is not the function of the State.

What then is the function of the State? Briefly this. To see that the Indian has the opportunity for self-support, and that he is afforded the same protection of his person and property that is given to others. That being done he should be thrown entirely upon his own resources, to become a useful member of the community in which he lives, or not, according as he exerts himself or fails to make an effort. He should be located where the conditions are such that by the exercise of ordinary industry and prudence he can support himself and family; he must be made to realize that by the sweat of his brow he shall earn his bread; he must be brought to recognize the dignity of labor and the importance of building and maintaining a home; he must understand that the more useful he is there, the more useful he will be to society; it is there he must find the incentive to work, and from it must come the uplifting of his race.

As I stated before, in the beginning of his undertaking he should have aid and instruction. He is entitled to that. Necessaries of life also will doubtless have to be furnished him for a time at least until his labor becomes productive. More than this, so long as the Indians are wards of the general Government, and until they have been absorbed by, and become a part of the community in which they live, day schools should be established at convenient places where they may learn enough to transact the ordinary business of life. Beyond this in the way of schools it is a detriment to go. The key to the whole situation is the home. The first and most important object to be attained is the elevation of the domestic life. Until that is accomplished it is futile to talk of higher education.

This is a mere outline. There are innumerable details to be considered and many difficulties to overcome. In some places the conditions are already ripe for the surrender of Government control; in others the natural conditions are such, and the Indians are so situated that, if protected in their rights, they should soon be ready for independence. But in other places the question assumes a more serious aspect. Located in an arid region, upon unproductive reservations, often in a rigorous climate, there is no chance for the Indian to make a living even if he would. The larger and more powerful tribes are so situated. So long as this state of things exists the ration system with all its evils must continue. There can be little or no further reduction in that direction than that already made without violating the dictates of humanity. Already in several quarters there is suffering and want. In these cases something should be done toward placing such Indians in a position where they can support themselves, and that something should be done quickly.

But whatever the condition of the Indian may be, he should be removed from a state of dependence to one of independence. Many of the older Indians realize the opportunities open to the younger men that were denied them and urge their sons to make themselves equal to the white man, to attain places for themselves that guarantee independence. But the only way to do this is to take away those things that encourage him to lead an idle life, and, after giving him a fair start, leave him to take care of himself. To that it must come in the end, and the sooner steps are taken to bring it about the better. That there will be many failures and much suffering is inevitable in the very nature of things, for it is only by sacrifice and suffering that the heights of civilization are reached.

THE WAR ROOM AT THE WHITE HOUSE

HOW THE PRESIDENT SEES EVERY MOVEMENT OF THE ARMY AND THE NAVY AND KEEPS IN TOUCH WITH MEN AND EVENTS THROUGHOUT THE WORLD—THE GREAT MAP AND THE SECRET CODES

BY

WALDON FAWCETT

THE Cuban War developed in the White House the novel institution known as the Telegraph and Cipher Bureau. M. Cambon, the French Ambassador at Washington, attributes much of the rapid success of the United States in that conflict to the facilities for quick communication afforded by this marvelously equipped department.

President McKinley conceived the idea of this telegraph and telephone office for his personal use at the outbreak of the war. It is called the "War Room" because it formed the common channel through which was received and dispatched all the most important information about the opposing armies.

The Bureau is an apartment the size of an ordinary drawing-room, containing the most improved modern apparatus for communicating quickly by telephone, telegraph or ocean cable with every accessible portion of the globe. The President, although he is the Commander-in-Chief of the Army and of the Navy, was formerly unable to know exactly the progress of events at the seat of war. Battles were fought, campaigns planned and carried into execution, and even surrenders were arranged without direct communication with the Chief Executive at every move; but President McKinley was enabled to direct from his office in the White House the operations of the army and the navy in Cuba and Porto Rico. The "War Room" brought valuable and prompt information of the great strategic game played upon the waters of the Atlantic. While the press and the public were kept for weeks in suspense about the movements of Admiral Cervera's fleet and the intentions of its commander, the President, through secret agents in Europe, was possessed of accurate information disclosing the plans of the Spanish Government before its war vessels left the home port. The movements of the hostile squadron were marked day by day upon a great map on the wall, and in the secrecy of the "War Room" the President knew that the fleet was in the harbor of Santiago before the public was informed. As the invading army advanced into Cuba, telegraph lines were constructed, and the President was kept in touch with his commanders in the field. So perfect were the arrangements that he was able to communicate from Washington in less than twenty minutes with the officers on the firing line at Santiago.

There were days when the President, the Secretary of War and the Secretary of the Navy sat for hours at the elbows of the telegraphers, directing in person the military operations thousands of miles distant. On the day which brought the occupation of Santiago the President stood before great maps on which were marked in contrasting colors the exact position of every detachment of the American and Spanish forces. When a flag of truce appeared at any of the enemy's outposts the anxious commander-in-chief was apprised of the fact within a few minutes. Had the slender metallic strand between the President and the powder-begrimed fighters in the trenches been a telephone instead of a telegraph line, he might almost have heard the thunder of the guns and listened to the cheers of the American soldiers as the red and yellow flags dropped from the ramparts. The Bureau has never seen a more eventful day.

The great map system, which gives the exact position of every vessel in the United

States navy and every portion of the American fighting force, has been constantly developed and improved since the establishment of the Bureau. The United States Hydrographic Office and the Coast and Geodetic Survey first prepared charts, outline and colored maps, which remained in use for some time, but were later replaced by one general map, which is probably the best and largest of its kind.

This new map, which occupies one entire wall of the room, is twenty feet long by eight feet wide, and the lines on its surface indicating parallels and meridians aggregate more than two thousand feet. It was painted by hand, four months being required for the task. Twelve colors were used, representing the twelve principal Powers and their colonies. Countries without possessions are represented each by one of four other colors, and a key of colors assists the student. The map of Egypt combines the colors of Egypt and England, gradually shading off into the English color as more established British sovereignty is reached below Khartoum.

All political boundaries are shown in broken lines where they are fairly well established; otherwise they are defined by color only. The ownership of those islands whose ownership has been definitely determined may be easily found by a reference to the key of colors. In each country the capital and cities of commercial importance are marked, as well as coaling, docking and repairing stations and points of strategic importance. The submarine cables are shown in red lines, and their principal termini are indicated, and foreign mail routes and distributing points are shown. Every railroad of possible military importance, such as the trans-Siberian line and the railway system in China, is given with details of route and the territory traversed.

To indicate the movements of the military and naval forces more than a thousand miniature flags, about three-quarters of an inch square, are used. Each commander in the military and naval service is represented by a tiny United States flag bearing his name, which is shifted about on the map as he moves from one place to another.

The cavalry, the artillery and the infantry are represented by flags of their respective colors—namely, yellow, red and white—giving the number of the regiment and the letter of the troop, battery or company. Each company of engineers is indicated by a diagonal red and white flag; each detachment of the signal corps by a white flag with a red centre, and every branch of the hospital corps by a diminutive red cross flag. Ships of every class, from a battleship to a collier, are indicated by red, white and blue flags bearing the name of the vessel, her class and the number of guns she bears. The army transports are represented by small blue and white flags, each carrying the name of one ship and indicating the number of officers and men she carries.

As the official reports are received at the White House by telegraph and mail the little flags are moved in accordance with the changes of the ships or the regiments that they represent. Should the President be interested in any conflict between two foreign Powers the positions of the opposing forces could be shown.

Twenty-seven telegraph wires enter the White House; thus it is possible to secure a direct wire to any city at any time, reserving it for Governmental business as long as desired. A double wire is provided for direct communication with the President, wherever he may be, and another double wire constitutes an exclusive line for the safe transmission of confidential cipher business between the executive office and the cable offices in New York City. It is customary to send cablegrams through the New York offices of the cable companies, but the operators at the White House have, under stress of unusual circumstances, communicated directly with the American terminal offices of the cables at Sydney, Cape Breton.

The telephone system is even more extensive. There are in the White House eight separate telephone stations, located in the executive offices, the private apartments, the stables and elsewhere to afford quick communication between the various parts of the building. The private telephone system of which these are a part consists of three separate trunk lines with seventeen miles of exterior lines, giving direct wires to the eight executive departments of the Government, the Government printing office, the library of Congress and other centres of activity in Washington. The whole system is controlled

by the switchboard in the central exchange of the Telegraph and Cipher Bureau.

The headquarters of the police and the fire departments and all private telephone stations throughout the city are reached from the White House by the wires of the Washington telephone system. In addition there are private wires connecting with the Senate and the House of Representatives so that the President may talk confidentially with the presiding officer or any member of either body. To insure secrecy, the system of wires which connects the President's private office in the White House with the desks of the various members of the Cabinet at their respective Departments is automatic in its action, the central station being in the garret of the White House. Not even an operator at "central" is enabled to hear what passes between the Chief Magistrate and the members of his official family.

The Telegraph and Cipher Bureau is conducted with method and concentration, and since there are few operators it has sometimes been necessary to resort to original expedients. An operator receiving a long telephonic message would repeat it word by word to a graphophone to be transmitted to the President at his leisure, and graphophones of carefully guaged speed have been used to record long messages clicked off by the telegraph instruments. When the office was rushed with work, the operators transcribed the records on the various cylinders as they found time between the incoming messages.

Capt. Benjamin F. Montgomery, Signal Corps, United States Army, the officer in charge of the Bureau, is almost constantly in communication with the President when he is traveling by rail. A careful itinerary of the journey is prepared in advance, and a copy of this is furnished to the Telegraph Bureau. If the journey be an extended one, a large map is prepared on which every stop is indicated with its time and duration. By means of this chart and a thorough system of reports from train despatchers, the exact location of the President's train is always known and a message may be placed in his hands at almost any moment. When President McKinley was spending his vacation at Canton last summer, the various Cabinet officers almost invariably went to the "War Room" to communicate with him.

The system employed in the Bureau enables a half-dozen telegraph operators to perform work which under ordinary circumstances would require from fifteen to twenty men. The White House telegraphers are experts, and are all "code men"—that is, able to handle messages which are in cipher. The operators work in three "shifts;" this Bureau is the only telegraph office in the Government service which is never closed. Telegraphic messages are received in ten different codes. The State Department has three codes, for use chiefly in confidential communication with American representatives abroad; the War Department and the Navy Department each has three codes, and the President has a private code. A code may be changed or its use discontinued at any time if it is suspected that its character is known to other than the proper authorities. The exterior precautions for secrecy are fully equalled by those exercised within the White House. Visitors are seldom admitted to the telegraph and telephone room, and the telegraph operators use what are known as secret sounders, so that even were another telegrapher in the room he could not ascertain the nature of the messages.

During the Spanish-American War and a few months following, the Telegraph and Cipher Bureau handled nearly half a million telegrams, beside thousands of telephone messages. Three-fourths of the total number of messages are of a confidential nature. As an instance of the quickness with which the Bureau acts in emergencies it may be noted that in less than fifteen minutes after Mr. McKinley was shot, the signal officer at the White House had secured two exclusive wires to Buffalo—one a telegraph wire and the other a long-distance telephone circuit. While the President lay hovering between life and death nearly five thousand messages passed between the White House and the Milburn residence.

The routine business of the Bureau is not all. The President goes to this office when he presses the button which sets in motion the wheels of an exposition, and here he entertains a few friends when the returns from any important election are received; and into this telegraphic hopper pour the hundreds of congratulatory telegrams with which a President is always deluged after the delivery of a significant speech or the submission of an important message to Congress.

ARCTIC CLIFF DWELLERS

THE STRANGE RACE THAT PEOPLED KING ISLAND —THE COMING OF DISEASE AND THE DISPERSION OF THIS LAST REMNANT OF THE STONE AGE

BY

R. NEWTON HAWLEY

SURGEON OF THE UNITED STATES REVENUE CUTTER "BEAR"

Illustrated from photographs taken by the author

FEW maps show Oo-ghee-a-book or King Island, which is situated in North Behring Sea, about thirty miles south of the straits and about eighty miles below the Arctic Circle. Its precipitous walls of volcanic rock rise almost perpendicularly from the deep icy sea to a height of nearly eight hundred feet, and the never-ending surges of these restless waters dash the spray to meet the low-hanging clouds that hover about this lonely rock.

The island is less than two miles in length, and perhaps about half that distance at its widest part. It is almost entirely devoid of vegetation; not a tree, bush or shrub to relieve the rugged monotony; mosses, lichens, and here and there a bunch of green weed or tuft of coarse, gray grass, struggle feebly through the brief existence of an Arctic summer. During the season myriads of sea-fowl make their home and rear their young among the rocks, and in calm weather their harsh, discordant cries heard through the fog are nature's danger signal to the mariner.

The only place on the island where a landing is possible is on the south side. Here the face of the cliff is cut by a steep ravine extending upward to the level plateau which forms the summit of the island. There is no beach, and at all times landing is difficult and dangerous, and only possible during the most favorable weather.

The houses, some forty in number, are scattered without regard to order, wherever they can be made to hang on the almost vertical face of the cliff; the lower houses being more than one hundred feet above the water, from which level they rise in irregular tiers or terraces one above the other, the floor of one house frequently forming the roof of the one below. The houses are so constructed and set on top of one another as almost to suggest one large communal dwelling, having perhaps a far-fetched resemblance to the cliff dwellings of Arizona and New Mexico, differing vastly, however, in material and mode of construction. The summer houses are square boxes of walrus skin stretched on frames of drift-wood, lashed together and guyed to the rocks with thongs, no nails, screws or other civilized methods of joining being used. These houses are usually entered from a platform of drift-wood on the side facing the sea, and the circular opening which is used for a door serves also for a window, admitting light and, when the weather is not too cold, air. For winter dwellings, caves in the rock, rudely but skilfully walled with loose fragments of stone, are used; some of the winter houses being reached by a tunnel several yards in length, after the fashion of neighboring Eskimo on the mainland.

As in most Eskimo villages, there is one house larger than the rest, known as the *Kashime*, which answers the purpose of a public house or club, and its hospitality is impartially shared by the entire community. It is often the home of the young unmarried men, and the place of entertainment for strangers. It is also the place of general gatherings, where the long Arctic night is enlivened by the shouts and laughter of the half-naked dancers and the rude, monotonous music of the tom-tom. Here the gossips meet, here the Shaman performs his tricks of magic, and the hunters of bear and walrus relate their deeds of daring on sea and ice floe.

Inside the ordinary dwelling a low bench extends around two or three sides of the single

room which serves by day as a seat and by night as a bed. The room is usually about twelve or fifteen feet square, and in this single apartment a whole family, and sometimes two or three families, spend their entire indoor life. The household equipment is of the simplest and rudest description; a few wooden vessels and a curiously-fashioned stone lamp comprise the entire culinary outfit. This lamp, fed with seal oil, emits more ill-smelling smoke than light or heat, and serves all the purposes of a stove, but most of the food is eaten raw, or nearly so. Seal oil and walrus meat, and at certain seasons sea fowl, with an occasional dinner of tom cod or other fish, boiled or dried and eaten raw, form the almost unvarying diet of the King Islander. Of vegetables they know nothing from one end of their lives to the other. Tea and tobacco, their only luxuries, are shared impartially by all ages and both sexes.

KING ISLAND SHORE

This little tribe, who have for ages made their home on one of the most lonely rocks in the world, are probably among the last men of the stone age who have survived to see the

AMONG THE CLIFF DWELLERS

dawn of the twentieth century. Among them many of the habits and customs of primitive man survive ; fire-arms are possessed by a few, but seal and walrus are yet hunted with the spear, and making spears and other weapons with flint heads and ivory points is not yet a lost art. Birds are killed with slings, and fish are taken with whalebone lines and curiously wrought hooks of stone and ivory. Spear heads are now found in use among them, flaked from broken glass, fragments of bottles, and fashioned like those of flint, once so common among savage races.

Their boats, however, are marvels of primitive naval architecture, and are sought in trade by coast tribes in the far north. Their light and graceful kyaks made of the skin of the *oogrook* or large seal, stretched over a frame of drift wood, lashed together with thongs of sinew or whalebone, are so deftly sewn as to be perfectly water tight. The *oomiaks* are larger boats, sometimes more

TEGOOK
The belle of King Island

KING ISLAND ESKIMO

than forty feet long, and capable of carrying twenty or thirty people. Like all Eskimo, the King Islanders are daring and skilful sailors, and, knowing no fear, venture far to sea in their frail craft, often crossing to the mainland, a distance of thirty miles; yet swimming is an unknown art among them, and, indeed, would be of little use in the icy water of these high latitudes.

In appearance the King Islanders most resemble the Eskimo of the adjacent Alaska coast, who are the only people with whom they have any intercourse, and with whom they are closely allied in their customs and superstitions, and even with these the difference in dialect renders communication very difficult. The *kamatok* or custom of killing the sick and aged, commonly practised on the Siberian coast and St. Lawrence Island, is almost unknown, but the inexorable rigor of nature on this barren rock efficiently provides for the survival of the fittest only.

Sometimes the island has been swept by epidemics which have threatened extermination of the tribe; as in the summer of 1900 when disease carried off at least a third of

the entire population. The previous winter had been a hard one, and the passing of the ice had found the people weakened by hunger and unable to take advantage of the spring hunting season; few seal or walrus were taken, and a whaler visiting the island to trade had left the disease, which spread rapidly and disastrously, as it always does in the fertile soil of a primitive race. When the United States revenue cutter *Bear* visited the island on the 2d of July, 1900, many had died and nearly all were sick, but little could be done except to give them the food so much needed.

On the second visit of the *Bear* in August the island was found entirely deserted by the natives. Lean dogs wailed dismally from the rocks as our boat approached. Not a live human being was to be found, but the trail of the pestilence was everywhere visible.

Later it was learned that the surviving King Islanders had crossed over to the mainland and established themselves near Cape Nome and Port Clarence. Some have returned again to the island, but the time seems not far distant when the remnant of the tribe will be absorbed by the natives of the mainland, and one of the last and most interesting relics of the men of the stone age will pass into legend and tradition.

KING ISLAND BOYS

CLIFF DWELLINGS ON THE HILLSIDE

THE HEAD OF FOUR HUNDRED SCHOOLS

THE STRENUOUS MODERN METHODS OF DR. W. H. MAXWELL, SUPERINTENDENT OF SCHOOLS IN GREATER NEW YORK — HOW A PLACE TO TEACH WAS REFUSED HIM YEARS AGO — HOW HE BECAME A NEWSPAPER MAN AND LATER A SUCCESSFUL SCHOOL SUPERINTENDENT

BY

A MAN WHO KNOWS HIM

IN 1874 a tall athletic Scotch-Irishman landed in New York and tried to get a chance to teach. He was a Bachelor of Arts of Queen's University, Belfast, and a prizeman, having won his M. A. by examination. He had been a sub-master in the Royal Academic Institute of Ireland. In his pocket were testimonials of his success as a scholar and teacher signed by college professors known on both sides of the sea. He had come here, like many another young Irishman, attracted by our open door and welcome for scholarship, industry and talent. He wished to be a teacher in the public schools, and frequented the ante-rooms of the superintendents of public instruction in New York and in Brooklyn. But he found that there were no competitive examinations and that his testimonials were absurd. The kind of educational expert whose recommendation was indispensable in securing an appointment was missing from his collection. He had nothing from "the boss" or even from "the leading citizen of the ward." He found employment on the New York *Mail*, and in time became managing editor of the Brooklyn *Daily Times*.

It is a droll circumstance that this unknown young collegian of twenty-seven years ago, who could not secure the humblest position to teach in either city, is now in executive control of the school systems of both of these and of three other boroughs besides, comprising eleven thousand teachers and half a million children.

William H. Maxwell, Superintendent of the Educational Department just constituted by the revised charter of the city of New York, has a career easy to describe. Here is a man who broadened his European academic acquirements by an American experience of reporting, editing and managing. He acquired the wide view that the enlightened public man takes of public education unhampered by the traditions of school management; he sought out the freshest word that the active group of educational thinkers of the seventies—Spencer, Huxley, Bain and Compayré, were speaking and walked with it on his lips from the editorial room to an office as superintendent of schools in Brooklyn.

He came questioning, attacking and shaking up dry bones. The worshippers of the ancient fetiches doubted.

I have just read his first report. The things that happened in the Brooklyn schools seem commonplace to the younger generation; they were revolutions in those days. Complete high-school courses of four years were introduced. The curriculum of the elementary schools was modernized; kindergartens were established; English classics were put into the hands of children; nature and art instruction was established; manual training came in; promotion of scholars on their class records instead of by examination alone was instituted; the compulsory education act was enforced; teachers trained to teach were declared the only applicants who should be appointed.

These things were done while the absurd plan of management which so commonly marks a school system remained in existence: a board of untrained citizens, often chosen for political reasons, authorized by law to control appointment of teachers, arrangement of

studies, choice of books and the rules of conduct. I was on such a board once in an outlying suburb. The ordinary school system is a clever device for the division, concealment and evaporation of responsibility. When "investigations" are on one thinks of the game of "Who's got the button?" Any persistent citizen who follows a grievance through it for purpose of redress comes to regard it as a labyrinth built for extended hide and seek. To be filled by such a board there is a position called the superintendency of public instruction; its occupant makes up in title what he lacks in influence. He has no voice in the choice of his assistants immediate or remote, no initiative, no power. He is usually a collator of statistics and a reporter of averages. I do not know of any sadder spectacle in human affairs than that presented by the average superintendent of schools; his subordinates make fun of him behind his back; the ordinary citizen to his face. His waking concern and his dreaming nightmare is that dreadful thought: "the board, the board."

The thing that strikes me most in the printed comments on this man Maxwell is the repetition of the phrase "A superintendent that superintends." How he could do it with the machinery of administration devised for the schools is the puzzle.

The phase of Dr. Maxwell's eleven year struggle in Brooklyn that appeals most to an outsider is its humor. This humor reached a high mark on the occasion of his election to his higher position in New York. When some members of the board of education, feeling the responsibility of selecting a head for the greatest school system in the world and resolved to choose the largest man in America invited President Daniel C. Gilman, Andrew S. Draper and others to be the new chief, these men from their distant parts of the earth replied in effect, "There is one named Maxwell in your own city who is not without honor in our country."

The bitterest opposition experienced by the educational party to which Dr. Maxwell belongs was in its plan to raise the qualifications of teachers. In 1888, he was with Dr. Andrew S. Draper and President Nicholas Murray Butler in the scheme to secure a law compelling school boards to employ only teachers who had prepared themselves especially by technical studies or by actual experience for their peculiar work. It is commonly said that Dr. Maxwell wrote the bill which after many rejections was finally passed in 1895. It was bitterly opposed by the school boards of the cities of the State.

The law narrowed the circle from which teachers could be selected but it did not free the teacher already in service from reliance upon the favor of "the influential citizen." The Society for Ethical Culture published an address claiming that when promotions of teachers were made the positions were "like pennies tossed to a crowd of scramblers: the most pushing, those with the most powerful influence, getting the rewards." The New York *Times* published many letters from teachers who had been held back in favor of newer appointees officially rated as less competent but who had "reached" the powers that sat in the market place. The Public Education Association condemned the method in vogue saying that it degraded women and abolished the efforts of good teachers to improve their work. Some members of the board described their associates as holding office as a kind of sop in return for which they must work for the boss. One published a protest headed "A crying shame." Dr. Maxwell, with President Nicholas Murray Butler in *The Educational Review*, kept up a running fire at this feature of the system, claiming that the teachers were educated to feel that the cheaper qualities of "hustle," "influence" and "pull" were of more practical value than industry, application and devotion to duty. In Superintendent Maxwell's now famous annual report he made this statement:

> The young women who are licensed to teach are compelled to visit the places of business and residences of the members of the School Board to sue for appointment and to bring political and other pressure on the members to secure places.
>
> Under this system, a young woman who is without friends or influence, no matter what her attainments may be, usually receives an appointment, if at all, only after her inferiors, who have "influence," have been provided for.
>
> The result is that many teachers and principals have been promoted to places for which they are ill-adapted or wholly unfit, to the great injury of the cause of education.
>
> I submit that a teacher who has given up several of the best years of her life to the work has a moral right to demonstrate what she can do in the class-room without being subjected to the

ignominy of suing for an appointment, and without being compelled to resort to the tricks of the lowest grades of politicians.

One of the loudest cries against Doctor Maxwell I find to be that he is a theorist. It is another humorous touch that he himself strenuously maintains that he is one. A recent interview gives his theory of education in almost disappointing simplicity.

Good teachers are the essential aim of all administrative plans. Get that and the rest is easy. The public will know how to get the other necessities for you. No one should be allowed to teach until a reasonable presumption has been established that she is well educated, fairly familiar with the special knowledge underlying her art, of good character, and of good physical constitution. The very best men in the world are more needed as teachers than in any other work of the world. They must be attracted to this profession. They must be guarded from the harm of corrupt politics; from the debilitating effects of poverty or over-economy. They must be encouraged to grow in culture and mental power. Higher rewards must be given to those who do thus progress. For good teaching the highest wages paid for any work are none too high. And yet the school system is not for the teachers. We ask for their protection because of the children whose guardians and exemplars they are.

A study of the Superintendent's course will indicate that it was this theory that led him to join in the movement of the New York teachers which resulted in the Davis Law, providing for an advanced scale of wages. I have been told that his appearance on the floor of the executive chamber at Albany in defense of that bill, opposed by the President of the Board of Education, the Chairman of the Finance Committee, the lawyers of the School Board and of the Mayor's office, was the most extraordinary scene in the educational history of New York. His keen, quiet and incisive argument, and his aptness in answering interruptions and objections were superb.

After a somewhat minute study of the record, the policy and the methods of this interesting public official, I reach the conclusion that his injections of energetic common sense into the school system are singularly refreshing and effective.

TO UTILIZE THE EARTH'S INTERIOR HEAT

THE POSSIBLE COMMERCIAL GENERATION OF STEAM IN DEEP BORINGS — A HINT FROM THE GREAT GEYSER BASIN

BY

THEODORE WATERS

THE suggestion recently made by Prof. T. C. Mendenhall, of Providence, R. I., that the internal heat of the earth be utilized as a source of industrial power may prove to be practical. The British Association for the Advancement of Science is making a series of measurements of underground temperatures, and Prof. William Hallock, of Columbia College in New York City, says that the idea is feasible. He outlines a plan for obtaining steam from the earth's interior, and has recently measured the temperatures of some of the deep holes in the earth. He found that there is a regular rise in temperature for every foot of depth, and in many regions intense heat is encountered at no great distance. The moment we are able to obtain such power the industrial map will be changed as different areas of the earth's crust yield greater or less power.

Before considering Professor Hallock's observations let it be said that there are many holes in the earth which are a mile or more in depth. Some are mines, as in Michigan, where a well-populated community exists more than a mile below the surface. Others are

deep wells which have been sunk in search of gas, oil, water, and even salt, which is found a mile below the surface of Silesia. In Cornwall a zinc mine 3,000 feet deep extends out under the bed of the ocean nearly a mile from shore. In fact, men are crawling toward the centre of the earth at the rate of several hundred feet a year. The greatest progress thus far has been made at Paruschowitz, in Silesia, where the deepest artificial hole is already 7,000 feet, or 400 feet more than a mile and a quarter.

The shallower holes are important to the scientist because they furnish temperature measurements over wide stretches of territory. A comparison of underground temperatures has been made, and a theoretical rate of increase of one degree for every sixty feet has been determined. But there are exceptions to the rule which prove that the earth's crust is hotter in some places than in others. Professor Hallock lowered thermometers into the wells near Pittsburg and Wheeling, and found an increase of one degree for every fifty feet. The temperature of the Pittsburg well at the bottom is 129 degrees. On the other hand, Doctor Agassiz, of Cambridge, Mass., found the temperature at the 4900-foot level in the Calumet and Hecla mine, at Houghton, Michigan, to be not more than 100 degrees. The heat of the 2500-foot level in the Comstock Lode is 145 degrees. The Schladebach well shows a temperature of 135 degrees at the bottom, and the Sperenberg well 118 degrees. The Cornwall mines show a temperature of 100 degrees, and at Ronchamp, France, the temperature of the coal mines at 3,609 feet is 117 degrees. In short, it is proved beyond doubt that although it varies in different localities, the heat of the earth's crust grows gradually greater from the surface inward; and upon this Professor Hallock bases his argument for a new and universal source of power.

"It is not merely a question of getting steam," he said to me, "it is a question of the quantity of steam that can be had. Hot water is even now drawn from a well and used to heat a dwelling near Boise City, Idaho; and when we pumped out the water which had leaked into the well near Pittsburg, it was so hot that I could not hold my hand in it. Its temperature was about 130 degrees. But while the Pittsburg and the Wheeling wells are capable of heating the water that is left in them over night, even if their depth were sufficient to turn that water to steam it would require many hours of waiting, which would rob it of all commercial value. In other words there would be not the slightest difficulty in obtaining steam from the earth's interior, because that involves merely a little extra labor in boring down into the very hot area, and it is as easy comparatively to bore 10,000 feet as it is to bore 6,000; but in order to give the steam commercial value a method must be provided for dropping the water to the hot area, allowing it time to heat, and yet having it returned to the surface as steam without for a moment interrupting the flow.

"Suppose two holes were bored directly into the earth 12,000 feet deep and, say, fifty feet apart. According to the measurements I made in the Pittsburg well, at the bottom there would be a temperature of more than 240 degrees—far above the boiling point of water. Now, if very heavy charges of dynamite or some other powerful explosive were to be lowered to the bottom of each hole and exploded simultaneously, and the process repeated many times, I believe the two holes might have a sufficient connection established. The rock would be cracked and fissured in all directions as in deep oil wells when they are shot; and if only one avenue were opened between the holes it would be enough.

"The shattering of the rock around the base of the holes would turn the surrounding area into an immense water heater. The water poured down one hole in the earth would circulate through all the cracks and fissures, the temperature of which would be over 240 degrees, and in its passage it would be heated and turned to steam which would pass through the second hole to the earth's surface. The pressure of such a column of steam would be enormous; for aside from the initial velocity of the steam, the descending column of cold water would exert a pressure of at least 5,000 pounds to the square inch which would drive up through the second hole everything movable. The problem is therefore a mechanical one, and the chief difficulty would be the connecting of the holes at the bottom. This accomplished, the water heater would operate itself and a source of power be established that would surpass anything now in use.

"Yet as an undertaking it would not be beyond our present standards of cost or enterprise. Judged by the Pittsburg and Wheeling wells, two such deep holes would each cost about $10,000 a mile, so that the plan might possibly be carried out for $50,000. The benefit to science would be worth many times this amount. It might not be necessary to go down so far. The estimate of depth is based on the Pittsburg district but there are many places where the increase in heat would be much more rapid. The Yellowstone Valley would almost surely yield commercial temperatures at comparatively shallow depths. Some years ago I went into the Firehole River district for the United States Geological Survey and made measurements of geyser temperatures. We lowered electrical thermometers into the geyser tubes and got a series of records which convinced us that mighty forces are at work under that region. Of course the evidence of this is plain to anyone who has watched the geysers in action and I have more than once suggested to the Survey officials the desirability of boring a hole 3,000 feet or more into the geyser basin.

"Our manner of measuring the heat of the geysers suggests another way of utilizing the heat of deep holes. We used a thermostat because the heat of the geyser tubes is very erratic and surges up and down violently, yielding a varying record. When lowered into the boiling geyser the heat acting on the two metals caused an electric current to flow in the cable and by observing the galvanometer which was in circuit we were able to determine the degree of temperature merely by observing the strength of the current. Now if the thermopile is ever perfected so that a great deal of current can be made directly from heat it would be possible to utilize deep holes and convert the heat of the earth directly into electricity without the intermediate use of steam. Even as it is, the heat of the geyser tubes could be utilized without very deep holes. The grandeur of the region in winter is unknown to the hot weather tourist and I believe if a hotel were to be established in the basin it could be heated with water conveyed in pipes from the boiling springs. I am told that an hospital in Grenelle, Switzerland and a factory in Würtemburg are heated with water from hot springs. Many artesian wells develop a temperature of eighty and ninety degrees, the depth varying with the locality, and when we think how many hot springs there are it is rather surprising that the heat from them is not more generally utilized.

"The most remarkable evidence of the power of the earth's heat was seen one night in the geyser basin. We were in camp. The day's work was done and the men lay around, asleep or talking together. Columns of vapor stood above several of the geyser pits, and from innumerable holes and cracks in the ground thinner shafts of vapor came forth. As the evening dragged on we lost sight of these in the darkness, but presently the moon rose and then we seemed to be in some fairy palace. No wind was stirring and the numberless shafts of vapor moved straight up into the air like the columns of a temple. After rising some feet however a higher air current caused the columns to sway and to blend together until they formed a roof which hung over the geyser basin and through which the moon shone. It was a weird sight.

"The force which animated the temple exists under every foot of the earth's surface and it will be merely necessary to dig far enough in any place to realize the dream of harnessing the earth's heat. The correctness of this statement is proved by the expressed readiness of the Pittsburg well borers to drop their plummet if necessary three times as far toward the centre of the earth as they have done already. Such a system might change the commercial aspect of the world, since the greatest manufacturing communities might gather in those regions which yielded up heat the most readily."

It is the intention of the owners of the Pittsburg deep well to continue the hole down into the earth until some remarkable demonstration of the pent-up heat is experienced, a course for which the owners of the well are to be commended, as the expense is great and the gain mostly for science. This was originally an oil well, but below the oil sand a natural gas fissure was struck and each product was used in turn to furnish power for the boring. The latter is a simple operation. A heavy drill attached to a derrick cable is hoisted up and down in the hole after the method of a pile driver. The constant blows of the drill on the rock cause it to sink gradually downward.

THE UNITING OF AMERICAN SOCIETY

HOW THE NATIONAL CHARACTER IS BEING TRANSFORMED BY INDUSTRIAL PROGRESS — A MORE COMPACT INDIVIDUALITY AS A PEOPLE — THE EFFECT OF MANUFACTURING DEVELOPMENT IN EFFACING SECTIONAL DIFFERENCES AND EVOLVING A UNIFORM ORDER OF SOCIETY

BY

FREDERIC EMORY

CHIEF OF THE BUREAU OF FOREIGN COMMERCE, DEPARTMENT OF STATE, AT WASHINGTON

CONSOLIDATION is the one idea dominating the industrial movements of our day, and the same process is going on in the later evolution of our national character. That is to say, as industrialism tends more and more to become uniform, cohesive and strong in all parts, so the federation of the States is taking on the complexion of greater solidarity, not only in its political forms but in its social organization, and the relation of the various parts of the country toward each other.

One realizes this fact only after careful study of the drift of economic development throughout the Union. There is hardly any considerable part of our country which can any longer be said to be exclusively agricultural or pastoral. In whatever direction we look, we see furnaces or factories springing up and industrialism either nascent or fully developed.

INDUSTRIALISM ON THE FRONTIER

For example, let us take the least favorable portions of the West. The census returns for Arizona, New Mexico, the Indian Territory and Oklahoma may be accepted as representing the frontier conditions. The people of these Territories are still chiefly engaged in agriculture and mining. "They have not yet reached the stage," says *Census Bulletin No. 71*, "which is favorable to the development of manufactures, and nearly all of the industries shown as existing in each of the Territories are the mechanical industries that relate essentially to the building up of new countries, such as lumber and timber products, the smelting and refining of metals, and flour and grist mills." The growth on these lines when measured by the percentage method, we are told, is "abnormal," and much greater than the increase in population. The percentage of increase in the number of establishments since 1890 has been eightfold; in capital employed, tenfold; in number of wage-earners, nearly fivefold; in the value of product, thirteenfold. The total amount of capital rose from less than two millions in 1890 to nearly nineteen millions in 1900; the gross value of product, as obtained or fixed at the shop or factory, from less than three millions in 1890 to nearly thirty-eight millions in 1900. While these industries are mainly of a primary character, it may be assumed that they are the forerunners of a general manufacturing activity in maturer and more complicated forms.

THE NEXT STEP IN MANUFACTURING

This theory is borne out by a glance at what *Census Bulletin No. 75* shows for Idaho and Wyoming, which may be taken to represent another step in industrial development. In Idaho, a healthy growth in manufactures is reported, "the value of products increasing nearly threefold and the amount paid for wages nearly sevenfold from 1870 to 1900." Although manufacturing is limited to the production or repair of articles for local consumption, "the demand for these products has stimulated the growth of the so-called neighborhood industries," which ultimately, no doubt, will expand beyond the local requirements. Among the industries are boot and shoe factories, brick and tile works, cheese and butter factories, flour mills, planing mills, foundries and machine shops, furniture shops, cigar factories, etc. In Wyoming, lack of

transportation facilities has retarded the utilization of the rich deposits of iron ore and abundant supplies of petroleum, but, nevertheless, there has been "a marked development in the manufacturing and mechanical industries," since 1870. The significant fact in all these States is that local industries have sprung up as they were needed, providing a diversity of employment as well as convenient sources of supply, and promising, in course of time, to bring about that blend of agricultural and mechanical efficiency which is becoming more and more typical of the average American community.

MANUFACTURES IN OLDER AGRICULTURAL STATES

The States of Iowa and Kansas may be used as examples of what is happening in the more highly developed parts of the West. We are accustomed to think of them as almost wholly agricultural, yet the manufactures of Iowa yield a net product of over 120 millions, and those of Kansas a net product of about 136 millions. In Iowa, "manufacturing enterprises are evenly distributed over the State, and are diversified in character." While the manufacture of flour, meat packing and butter and cheese making are the principal industries, there is a wide range of production in other lines, including agricultural implements, baking powders, bicycles, blank books, boots and shoes, bricks and tiles, brooms and brushes, carriages and wagons, clothing, druggists' preparations and patent medicines, canned fruits and vegetables, furniture, gloves and mittens, artificial ice, planing mill products, pottery, roofing materials, rubber goods, saddlery and harness, soap and candles, cigars, cigarettes and tobacco, trunks, washing machines, windmills, woolen goods, etc.

The industrial conditions in Kansas are very similar to those in Iowa—that is to say, while the important branches of manufacture are those which spring naturally from cattle-raising and agriculture, there is a great and increasing variety of production. The slaughtering of cattle and the packing of meat comes first; and allied with it is the making of soap and candles. Next in order come flour and grist milling; then car construction and general shop work by steam railroad companies; zinc smelting and refining; cheese, butter and condensed milk making; and finally, among the more important industries, the manufacture of foundry and machine shop products. "A number of manufacturers of flour-mill machinery," says the census report, "have located in Kansas City and Leavenworth, and have found a productive and responsive field for their energy and capital."

The same general process of industrial development, varying with local conditions but following a clearly defined law of progression, would doubtless be disclosed by an examination of the census returns for all the Western States. The examples given are enough to demonstrate that, under the economic conditions now in force, successful husbandry in this country goes hand in hand with manufacturing development. In the West, this beneficent conjunction of industrial forces is promoted or retarded as the transportation facilities are adequate or not. In the dairy industry in Kansas, for example, "good railroad facilities have made it possible to collect cream from numerous and scattered substations for the supply of the more centrally located butter and cheese factories." The 9,000 miles of railroad in the State, "equivalent to twenty-two trunk lines across its entire length, were built primarily to handle its large agricultural and stock-raising products," but they also contribute immensely to the upbuilding of manufactures.

A SIMILAR CHANGE IN THE SOUTH

What is true of the West is even more conspicuously evident in the South. Throughout the South, at the present time, a vivid interest in all industrial undertakings has replaced the exclusive absorption in agricultural pursuits. The discovery of oil wells in Texas promises to convert a great pastoral State into the same composite of manufactures and agriculture which is seen in its fullest development in the fertile regions of the Middle West.

Taking the South as a whole, the potentiality of its industrialism seems to be illimitable. The advantages of climate permitting a wide range of agricultural production—of cotton, wool, live stock, cereals, lumber, sugar-cane, and semi-tropical fruits—have, in recent years, been supplemented by the working of vast deposits of coal and iron in the heart of the South, and now, of oil of the highest value for fuel. With the raw material and unlimited supplies of fuel, the South seems destined to

become in the near future a great hive of industry. The progress already achieved, when compared with conditions twenty years ago, is seen to be remarkable. During that period, the cotton crop has grown from less than six million bales to ten million, and the Southern cotton mills now consume one and a half million bales as against 188,744 bales in 1880. The capital invested in the mills has increased from twenty-one million dollars to one hundred and fifty millions. The cotton-oil industry now employs 500 mills with a capital of fifty millions. The grain has risen from 431 million bushels to 660 million bushels. In 1900, the South mined forty-eight million tons of coal, against six million tons twenty years ago, and its furnaces produced 2,600,000 tons of pig iron instead of 397,000 tons. Mr. R. H. Edmonds, to whom I am indebted for these figures, estimates the manufactured output at more than three times what it was in 1880.

MANUFACTURING IN TWO REPRESENTATIVE SOUTHERN STATES

Take the bulletins of manufacturing statistics, for instance, for Alabama and Georgia. The net value of product in Alabama is sixty-one millions of dollars, and of Georgia, seventy-eight millions. In Alabama, the most important industry is the manufacture of iron and steel. It employs nearly fourteen per cent. of the wage-earners of the State, and there has been an increase in the value of products during the past decade of nearly five million dollars, or over thirty-eight per cent. In 1900, exports to England, continental Europe and Japan amounted to 113,185 tons, "a quantity greatly in excess of that reported for any other State." In the manufacture of steel, "every indication points to a development as rapid as that shown in pig iron," and springing from the iron and steel industry is the manufacture of foundry and machine-shop products which has considerably more than doubled the value of its output which, in 1900, amounted to nearly $5,500,000.

The development of cotton manufacturing in Georgia has been remarkable. During the ten years since 1890 the increase in the value of products was over $6,500,000, or about fifty-four per cent., and the output, as reported by the census, now aggregates $18,500,000.

A most significant illustration of the interplay of manufactures with agriculture is found in the statement of the *Census Bulletin* that the cotton factories of Georgia "have benefited the farmers by providing a strong local market for cotton and a better demand for farm products, and therefore farmers are joining the business men as subscribers for the capital stock of the new corporations. The same mutuality of interest will be found to exist with reference to the other industries, which, as we have seen, have their origin in the natural resources of the agricultural States. On the one hand, the farmer, the cattle raiser, the lumberman find in the neighboring factories convenient markets for what they have to sell; on the other hand, with the multiplication of local industries to supply their various needs, they are no longer dependent upon distant sources of supply for what they have to buy. As the producer of the raw material begins to prosper from the growth of consumption by neighborhood factories, his wants increase. With increased ability to pay, he inevitably purchases more and in greater variety.

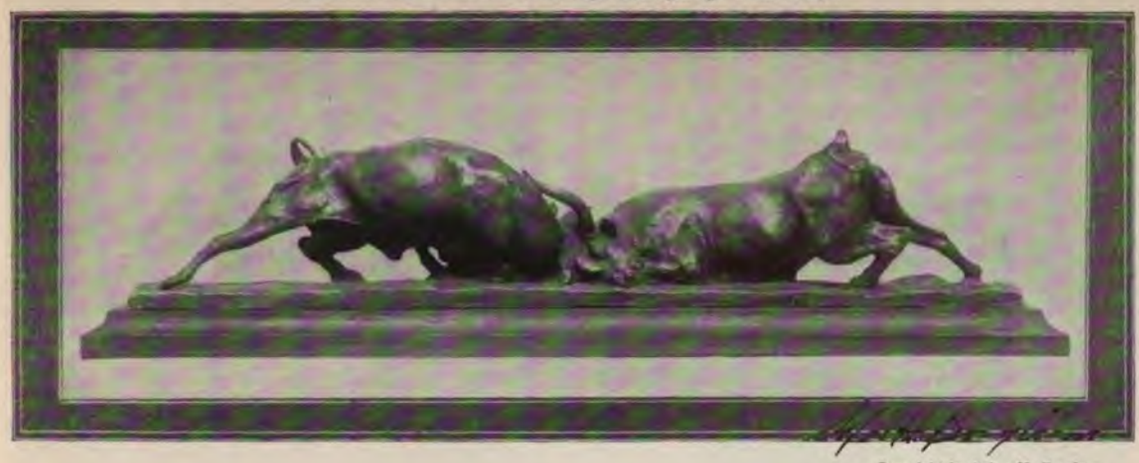
THE PROCESS OF SOCIAL CHANGE

Having traced in some detail the steady and often rapid progress of industrialism in those sections of the country—the far West and the South—where it has but recently obtained a footing and has had to contend with a variety of adverse conditions, we would seem to be justified in assuming that it is destined to spread like a wave to the remotest corners of the Union and to give the same general cast to the whole structure of American society. The ranchman of the West, the planter of the South will lose much of their individuality in this process of assimilation, and in the course of time an average community in either section will doubtless approximate very closely in habits, in ideas, in social development to the great mass of the population in those parts of the country where manufacturing is already a determining factor of ethical growth.

Every community will, of course, continue to preserve a certain individuality born of conditions peculiar to itself, but the differences between sections, it may be assumed, will be rendered trivial and obscure by the heavy impact of an industrialism, which, like a huge steam roller, will pass and repass over the face of society, reducing it practically to a uniform level.

THE BULL FIGHT

Leaders of the wild herd and thoroughbreds fighting. Done in 1901



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THE FRONTIER IN SCULPTURE

THE VIRILE GROUPS BY SOLON BORGLUM WHICH EXPRESS THE SPIRIT, STRENGTH AND WILD BEAUTY OF THE WEST. HOW THE COWBOY AND RANCHMAN BECAME A WANDERING PAINTER, AN ART STUDENT, AND ONE DAY "FOUND HIMSELF" IN SCULPTURE

BY

ARTHUR GOODRICH

IT was Rousseau, I believe, who said that a man should not work with his brain until he was thoroughly matured, that the boy and the youth should not be allowed to think but should, instead, live in the great outdoors. The idea is of a piece with the thought that genius must come fresh from the soil. While it is not an infallible rule of greatness, it is an interesting theory and a healthy one. In America it looks instinctively westward, and it suggests a story.

Back in the sixties when the West was still an untamed frontier, when the Indians were beginning their last desperate fight, when men's blood ran as red as a prairie sunset and their muscles were like the rocks they grappled with and when impulse was often law, a young wood carver named Borglum started from Denmark with his wife to seek a chance in the new country. They followed the Western path over seas and across the continent. From the Mississippi they marched together beside an emigrant wagon until they reached Ogden, Utah. For a few years the man worked thriftily at his trade but with constantly lessening enthusiasm. He had not "found his work." He decided to study medicine and turned back across the border to St. Louis. There were four children then, the youngest of whom, born a few months before, in 1868, they had named Solon. They stayed at St. Louis only long enough to get the desired degree, and, turning westward again, settled in Fremont, Nebraska. Fremont at that time was a typical prairie town where people who had become tired of going West stopped to find a home. The doctor's practice, which increased rapidly, extended far out into the wilds, in distant ranches, in lonely cabins lost in the sweep of unpeopled land and in neighboring Indian camps. Necessarily he owned a number of good horses.

Meanwhile young Solon grew into boyhood with the breath of the prairie fresh in his nostrils. In appearance he was a typical frontier boy. He was sent to school but he cared

little for books. Books and study were something artificial and civilized that kept him indoors. The prairie alone was real and the quiver of the pony under him and the whir of the wind in his ears. Wonderful holidays came occasionally to him and his younger brother, when their father would take them on one of his long rounds of border calls. Sometimes he would leave them at a friendly Indian camp and push on alone, while they played with the Indian boys and watched the big bucks swagger and heard the old men around the fire tell stories that they half understood. When Solon was still very young he could ride a horse and hurl a lasso with the best. He was never taught to be timid and he feared nothing. He grew up hardy and quick and

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THE BURIAL ON THE PLAINS

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THE BURIAL ON THE PLAINS

Indian women weeping at the mound. Awarded a silver medal at Buffalo

clear-headed, fit for action and hardship, an integral part of the rough life around him. And, because he was a quiet, sensitive, imaginative boy he was unconsciously akin to it all. His fancy plotted many kinds of adventure. Once with his brother he ran away in a box-car of a new railroad with the avowed purpose of fighting the Indians, but the only enemy they met was a brakeman who conquered them easily, and they walked home in chagrin.

He was a frank failure at school, and when he was fifteen his father sent him and his brother — his partner in many remarkable episodes, real and imaginary—to California to help an older brother stock a ranch. There, for a year, freed from the slight bonds that had held them at Fremont, they lived a life of luxurious action. More than this, he was taught his trade; he became hardened to work by day and night; he learned all the tricks of the cow-puncher, the exciting routine of the round-up. When they came back

his brother decided to go into business, on a railroad as it happened. It was expected that they would go together. But Solon shook his head.

"No," he said decisively. "I'd be as bad there as I was at school."

He wished to be free. The plains and the wild things called him. There was only one thing for him to do—to go on a ranch.

It so happened that Doctor Borglum had acquired a stretch of wild prairie bordering on Loop River in Nebraska, a long sweep of

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THE STAMPEDE OF WILD HORSES

Awarded Honorable Mention in the Paris Salon, 1899. Now owned by the Cincinnati Museum

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NIGHT HAWKING

When after a stampede the "boys" watch the herds by day and night until they are quiet

undulating country extending over about 6,000 acres. Occasionally the man who owned the ranch which edged the tract crossed it on his way to the nearest small cluster of houses they called a town, or a stray herd of wild cattle thundered over its border. Otherwise it was broad, desolate prairie. Everything about the place appealed to the young man's simple desires. So the two boys separated, the younger one to plunge into the busy new Western civilization which congregated at the railroad centres, while Solon eager for the plains and the old life struck back farther into the wild life of the frontier.

Up at Loop River he built a shack, stocked his ranch, and surrounded himself with "boys" who threw a lariat or broke a wild horse as well as he did—simple, rough fellows who bunked with him in the little cabin or rode with him on the prairie. Through the long, cold winter months, facing the cut-

ting wind and snow of the blizzards on the plains, around the crackling fire inside the cabin, while Joe Andrews, his right-hand man, or one of the other "boys" told stirring stories of other storms and narrow escapes from death, then on through the spring work, the delight of the true cow-puncher, and the long baking summer and finally the alert, straining days of the fall round-up, these men and their horses lived together daily comrades. The plains and their isolation knitted their lives into a single piece. Many a time a pony was unruly in the yard about the cabin, and was caught and controlled only by the most subtle cowboy strategy and brute force, but once out on the open plain with the long reach of prairie in every direction the man and horse became one in their loneliness, and each toiled in sympathy with the other. It was so with the men as well.

The young ranchman saw no one from year's end to year's end but his boys, his horses, his herds and the prairie, except when he rode to the nearest town to attend to supplies or sales. The "boys" knew him as a quiet, decided good fellow. He had nothing of the "boss" in him. It was merely part of the day's work for him to tell them what to do. Unconsciously he made his rude estate a typical democracy. He had his

THE BUCKING BRONCO

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THE ROUGH RIDER

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IN MR. BORGLUM'S PARIS STUDIO

duties, and the boys and ponies their work, and with the herds and prairie all were equal in the eyes of the great real world about them. The same storm beat upon each and the same hot sun. Such a philosophy was unconscious and inevitable.

His early sensitiveness to the impressions of the plains and the life that ran wild over them matured into a deep sympathy and manly tenderness. Many a time he would urge or lead his pony up some undiscovered ridge of country and, reaching the top, he would sprawl on the sand hill and watch the wind mow paths in the bunch grass below or, looking over the stretch of silent plain and

THE BLIZZARD

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hill to the illimitable blue beyond, he would unwittingly know himself a part of a great inexplicable Something that he could not understand or express. Or after a stampede, as he sat in the saddle or stood beside his horse at night alone, with the sweating flank of the herd before him, and the hills sand, and when a cow would falter, half frozen and exhausted, with the weird cry of a coyote in his ears he kept courage in the beast because he disliked to leave her to die. When there was a brawl at a celebration dance in town, attended by all the cowboys of the country round, after the round-up, he was

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LASSOING WILD HORSES

The first group upon which Mr. Borglum worked in Paris, and his first contribution to the Salon

and his cabin back of him somewhere in the blackness, the fierce epic of the plains wrote itself into his heart while he knew it not. Across the black ground, where the blizzard swept snow and sleet into his face, he guided the herd past the dry runs and gulleys in which the treacherous snow lay like a quick-

always looked upon as peacemaker. His quiet fearlessness and the thorough knowledge of his work made him the adviser of many a neighboring ranchman, and he watched over one horse ranch controlled by an Easterner as carefully as he handled his own property. Once a crazy ranchman over the hills terror-

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THE LAST ROUND-UP

The pony with empty saddle and half submerged in the snow is lost in an attempt to guide a cow to safety

ized the entire country until Borglum calmed him by insistent kindness, and started him on the way to recovery.

A number of years passed with scarcely a variation from the exciting routine of ranch life until, in 1890, an older brother, who was a successful painter, visited him. Just before he left he said one day:

"Solon, you ought to be an artist."

There was no visible reason for the remark. The man who was running a successful ranch had had little time to draw even if he had the inclination. He had never thought whether the life entirely satisfied him. He liked the work and he did it. He had, in fact, never drawn a line. He certainly had not "cried for mud when a baby."

More out of curiosity than for any other reason he began some rough pencil sketching after his brother had gone, and at odd times he drew the interior of the cabin, the ranch as it was submerged in a blizzard of 1891, and cows and horses, all kinds of horses. The work interested him more and more, and his brother's remark recurred to him with increasing insistency.

Along in 1893, his people were amazed to hear from him that he was going to sell off the ranch and study art. He did it immediately, without waiting for the best financial return, for he had little sense of the business of things, and a decision was a decision. This done, he struck off West and worked away with his brother in the Sierra Madre Mountains of California. But he soon grew restless and drifted South, taking with him his blanket and an oil-stove. He stopped at Los Angeles for a while, living on a few dollars a month which came to him regularly. He was facing the ragged edge of existence there when, one day, a man who owned a big horse ranch just outside of Santa Anna asked

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THE LAST ROUND-UP

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THE LAME HORSE

The same horse who was the model for "Lassoing Wild Horses"

him to go down and live at the ranch while he painted the horseman's portrait.

Once on the ranch he was back in the old life once more, half homesick for the Nebraska prairie. He worked at the portrait, however, and at intervals between sittings he spent hours on the private race track where the man paced and trotted and ran his best horses before him, while he studied their movement, measured their stride, watched the play of their muscles and felt their mood. This union of the old life and the new lasted four months when, having completed the picture, he wandered into Santa Anna. He found a windowless room with a great light hole in the roof above it, and spread his blanket in his first studio. It cost him two dollars a month. He soon found that even simple living of oatmeal and crackers was expensive. His clothes were getting shabby. One day he put a sign on his door, "In studio Saturdays only," and struck off after dusk into the wild country of the Saddleback Mountains, back of Santa Anna. By midnight he was well

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OUR SLAVE

A horse, caught by a lariat but fighting against it, has at last been strangled and so subdued

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THE FIGHT OF TWO STALLIONS
Which is still unfinished

away from civilization and, rolling himself up in his blanket, he slept till morning. Sunday he toiled farther into the mountains among the old Spanish Indians and greasers. All through the week, living with these lawless people who have been left stranded in the march of civilization, eating with them, sleeping beside them in the thicket, he sketched

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THE SUN DANCE

The Indian dance which many years ago was prohibited by the Government included the imbedding in the flesh of wooden skewers which during the dance are pulled out with the flesh. Mr. Borglum has the implements which were used in the last Sun Dance. The whistle which the Indian holds in his upraised hand is made from a turkey wing

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ON THE TRAIL.

The rider seeing a rattlesnake by the trail urges on his horse

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THE INTELLIGENT BRONCO

Who, left by his master handles one of the wild herd with human intelligence and skill

anything and everything he saw. Friday he started down toward the town once more, and, getting some sleep on the outskirts, he passed through the streets and into his little room before the earliest townspeople were awake.

The first Saturday he worked industriously and alone all day, and went back to the mountains at night. But the second Saturday he was surprised by a knock at the door.

In a few minutes' conversation the visitor introduced himself as an Easterner teaching school at Santa Anna. The young artist listened awkwardly. He never had seen any reason for talking about himself to any one. Just now there was certainly nothing to say that was cheerful. The teacher was going.

"How much would you ask to paint my portrait?"

THE BUFFALO

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The young man whom he let in looked around the bare room searchingly before he spoke.

"You are an artist, I believe?"

"Yes sir."

"Would you paint flowers?"

"Oh yes." He could and would paint anything.

"I've been looking for some one to help me and have just engaged some one else. I'm sorry I didn't find you before."

"So am I;" frankly.

"I don't know." Business details always staggered him.

"Would you do it for five dollars?"

"Yes."

"Got any money?"

"No;" with more humor than embarrassment.

"Well, here's three dollars in advance on the picture."

And he was gone. It was the beginning of a long, close friendship. That night there

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THE DANCING HORSE

Done in 1900 at the Nouveau Cercle, Paris

was a feast of oatmeal and crackers in the "studio," to say nothing of a few potatoes picked up outside a wholesale provender place nearby. The next Saturday the school-teacher called again, this time accompanied by two ladies who, he announced, wished to learn how to paint. Their regular weekly visits brought him a dollar each Saturday, and by continuing his journeys into the mountains he managed to exist for nearly a year. Meanwhile he obtained old copies of art journals, and read and re-read them.

He was becoming impatient for broader experience and more ordered study. He spoke of this to his friend the teacher, and together they planned a sale. He painted in everything he had sketched and when the sale was over he was a rich man. But he needed more than sixty-five dollars, the amount he received, and through his brother—his old-time boon companion—he obtained transportation. It did not take him long to pack his kit, his oilstove and his blanket and to start East.

When he reached Cincinnati on a cold November morning he readily found a level spot to spread his blanket in a little room which he rented for three dollars a month. The walls gave him an imprisoned feeling, and the roof cut off the open heavens to which he was accustomed. The next morning, strangely lonely among so many people, he went down to the school and found that he had money enough to pay for both day and evening classes in drawing. He was soon hard at work, but the well-ordered conventional life made him heartsick for the free plains. It was this more than anything else that set him looking for a stable. The lights at the United States mail stables burned brightly all night, and morning after morning long before daybreak he sketched and lived among his old friends, the horses. They became his confidential neighbors as in the West, and even while he studied each movement of their bodies he read secrets that were hid from the men around him.

For variety he began to try modeling in

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THE DANCING HORSE

Photographed for THE WORLD'S WORK by Gertrude Käsebier

SOLON H. BORGLUM

At work in his New York studio. The group in the foreground is entitled "Snowdrift"

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BRONCOS SURPRISED AT A SADDLE

In the attitude of wondering what the strange object is

the stables, and finally completed a figure of a horse pawing a dead horse lying on the plain. Anxious to know whether his work had merit, he wrote to Mr. Rebisso, the head of the modeling faculty, asking him to come to see it. For some time there was no answer. He wrote again, and one day the sculptor appeared. He examined the figure carefully, and turning to the student said impatiently:

"Young man, if I'd known you had anything like this down here I shouldn't have waited a minute. It's good work, promising work."

And, after a few questions as to when and how it had been done, he went away. Soon after a letter came asking Mr. Borglum to send the group to the annual school exhibition, although he was not a member of the modeling classes. He was therefore not eligible for the $100 prize, but the group placed on exhibition brought him a special prize of $50.

At the start of the next year he went back to the same routine, but things began to

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ON THE BORDER OF THE WHITE MAN'S LAND

Indian and horse on some ridge of land looking down at an emigrant train or pale-face settlement. The group for which Mr. Borglum was awarded a silver medal at the Paris Exposition

happen. First of all, he returned, one day, to find his room transformed. By some stealthy means his landlady had passed the door, which he always locked, and had brought in a cot, a chair and a table. This sudden luxury had scarcely ceased to be a wonder when Mr. Rebisso told him he could use the big studio the sculptor worked in, if he would look after the furnaces. He was at the stable as usual every morning, and when the time for the annual exhibition came he had seventeen different pieces ready, all horses, studies merely but all showing that unusual touch with the spirit, the inner life and instincts of the beasts that gave the simplest groups reality and beauty. This year he won the scholarship and prize easily.

By this time he had a new ambition. He looked toward Paris longingly; if only for a few months he must see Paris, with all its wonderful paintings and Old World sculpture. Mr. Rebisso was interested in the idea and another sale was planned, this time of plasters of the work he had done in the school. And in July, with a few hundred dollars in a letter of credit he started for Paris. He reached there very much as he would have struck new grazing ground in the West—still carrying his blanket. He expected to look around for a month or two and go back. He wandered about through art galleries, drifting from one museum to another, often getting lost because everything was strange and he could not speak French, until his brain was in a whirl and he was half sick of it all. Finally, after telling two or three men in sign language what he wished and getting letters of introduction which he could not read, he obtained admission to one of the largest stables in the city, and went to work on a group which he called "Lassoing Wild Horses," partly to cure himself of his homesickness.

He had hired a room for a little more than four dollars a month in the Latin Quarter and there he lived in his blanket until an opportunity came to sublet a little studio from an American artist in Paris. He grew interested in the group, and the desire to stay in Paris and work came upon him. The friends he had made advised him to do so, a few words of approval from Mr. St. Gaudens, who saw the group one day, encouraged him as did the kindly enthusiasm of M. Fremiet, the French sculptor. He wrote to Cincinnati, asking if he could not do his year's work in Paris instead of at home and in a few weeks the matter was settled by a favorable answer. He worked rapidly and when the time came for the annual exhibition at the Salon, he submitted the "Lassoing Wild Horses" and a figure of a horse in the wind. Greatly to his surprise both were accepted, and placed in prominent positions. Quickly following this first real success came the purchase of the latter piece by the Cincinnati Museum. Meanwhile he was working at companion groups, "The Bucking Broncho," "The Rough Rider" and "Night-Hawking." In the midst of Old World Paris he was living again in clay his early wild life, expressing in each group the pulsing, real West, springing with action and vital with that poetic touch that the prairie had unconsciously taught him. M. Fremiet was only voicing Rousseau's idea when he said one day:

"You are lucky, sir. Many young men go to art school, and come out polished with nothing to say. You lived, you had something to say, then you studied art."

His horse model, the one who had served him for "Lassoing Wild Animals," went lame and "The Lame Horse" was the result, He took some first medals at Paris exhibits. A New York dealer became interested in his success and negotiated for bronzes and marbles of his work. Then he moved into a much larger studio and began the life-size "Stampede of Wild Horses." He took a few weeks' course in the study of figure in the Academie Julien and spent many hours in the Louvre and the Luxembourg unconsciously softening under these new impressions. All the years at Cincinnati and Paris his oil stove had cooked his food and he lived as simply as he ever had on his ranch.

At the next year's Salon his "Stampede of Wild Horses" and "The Lame Horse" brought him an honorable mention, and the large group was afterward placed in the centre of the United States pavilion at the Paris Exposition, where his work brought him a silver medal. In the meantime he had married the daughter of a French clergyman, and in the next summer they followed together the old Western trail and he saw the prairie once more. A large part of the summer was spent at the Crow Creek Reservation. Nothing seemed changed except his

own life. He did not divide the punchers now, but studied the Indians and "boys" with a new zeal. His old sympathy was stronger than ever and he understood it all better. Here he did "On the Border of the White Man's Land," "Burial on the Plains" and began "Our Slave." He was back at Paris again during the Exposition, and in 1901 he sent a dozen pieces to the Pan-American Exhibition at Buffalo. Here, too, he was awarded a silver medal. This winter he has been living in New York, where he has decided to do his future work.

Solon Borglum today is not in any essential way different from the man Joe Andrews and the other "boys" knew in Nebraska. He is a quiet, unassuming, decided man, simple in his habits, ready still for hardship, caring nothing for luxury. He is and will always be, I think, akin to the frank, impulsive, just life of the old West. He will tell you that most of the things one reads about the frontier are caricatures, that the "bad man" of the plains is no worse than the "bad man" of New York, and that the cowboy has many points of advantage over the Wall Street banker. He will tell you—for his sympathies are with them—that the Indians are treacherous only when they are dealt with treacherously, that to fight was their only method of guarding their rights and that most of their massacres were just in intent. He feels as he did when a boy, that a swinging gallop on a Western pony is more real than a year's schooling.

His art is an expression of the man who felt the fierce epic of the West beating in his heart and knew it not, who knew himself a part of a mysterious Something that he could not put into words. And, because it is always unconscious, because it is never the message of a personality, it becomes the great West itself, the history of a picturesque century, the classic of the frontier, with all its virility, its rough tenderness, its rugged rhythm. The swinging rush of the stampeded herd is there, the sway of the wind in the prairie grass, the mystical union of all with the horse and its rider, as vital as the old Norse Sagas.

His work is only at its beginning, and the promise of the next years runs far ahead of his best achievement.

"Let a man but have beauty in his heart and believing something with all his might put it forth arrayed as he sees it, the lights and shadows falling upon it on his page as they fall upon it in his heart, and he rest assured that that beauty will not perish away out of the world." The saying applies to all art that creates and lives.

THE GERMAN EMPEROR AS HE IS

AN INTIMATE STUDY OF HIS PERSONALITY—WHAT KIND OF MAN HE REALLY IS—HIS ATTITUDE TOWARD THE UNITED STATES

BY

WOLF VON SCHIERBRAND

FOR MANY YEARS CHIEF CORRESPONDENT OF THE ASSOCIATED PRESS AT BERLIN

NO monarch of modern times has been so misunderstood as the German Emperor, and about none has public opinion the world over so wavered. In an age full of virile, powerful men, who in different spheres of human effort are achieving miracles, the Emperor stands out boldly—surely a strong proof that the man amounts to something. The world over his name has appeared daily, now as a menace, now as that of a strong armed friend. No features are more widely known than the firmly set jaw and upturned mustaches of the Kaiser. And yet no one knew the German Emperor himself, nor could anyone tell what he would do next. His own people have ceased to wonder, and accept his will as eternal law, and the other Europeans have become accustomed to believe that however mad he seemed there is always method in his acts. His picturesque-

ness, a penchant for saying and doing the dramatic thing, his frank strenuousness, all the sides of the man which gave him an appearance of attitudinizing are seen to be a natural part of the man. When Bismarck had been dismissed, when the civilized world stood aghast, and *Punch* came out with a cartoon showing the German ship of state in troubled waters and the weatherbeaten old helmsman turned away from the wheel, with the words below, "What next?"—then it was that the Emperor wrote to the Grand Duke of Saxe-Weimar, his great-uncle, "As to the rest, the same course will be steered and God with us." This showed a self-confidence which at that time struck many in and out of Germany as little short of foolhardiness, if not sacrilege.

Since then, less than twelve years ago, comment and wonder at his doings, his sayings and his aims have never ceased, and at no time has he been anything less than an intensely picturesque personage, a man who has continually given both friends and foes something to think about, to wax indignant over or to praise with enthusiasm. One day he has been declared a transcendent genius by some who pointed to a real or imaginary success scored by him on the chess board of international statecraft; the next day men have compared him to a vaporing fool or to a blatant advertising agent, when lo! this kaleidoscopic character would appear in yet another light. Thus the public judgment of him has never crystallized, and it is today in as unsettled a condition regarding this extraordinary man as ever. He has held a larger share of public attention in England and in America than any German ruler since the days of Frederick the Great; and it is quite safe to say that he has fairly hypnotized the Gallic mind. Thus, then, at home and abroad the Kaiser compels and invites criticism and comment; and proof of the difficulty of judging him fairly is given by the fact that there is as much diversity of opinion regarding him among the persons of his immediate entourage as there is outside of that circle.

His is an unusually complex mind. He himself proclaimed on a memorable occasion "I am an 'up-to-date' man"; and in many respects this is true. More than any other living monarch he shows appreciation of and interest in the ever-increasing victories of applied science in the material world. New and startling inventions and discoveries and improvements in medicine, in electrotechnics, in shipbuilding, in telegraphy, in the postal service, receive his instant and enthusiastic appreciation and help, and he spares neither time, pains nor influence to appropriate them for the nation whose head he is. "*Die Welt steht im Zeichen des Verkehrs*" (*i. e.*, This is an era of rapid transit) was another oft-quoted saying of his. Perhaps the most significant motto, however, was the one which he adopted while still a boy, during the days he went to the public school in Cassel—his "*Rast' ich, so rost' ich*" ("If I rest I rust"), which gives the keynote to his restless energy—a restlessness so much at variance with the typical German character as to have started those never-ending rumors of his mental unsoundness. That he is of a highly nervous temperament is undeniable, and beside the exalted conception he holds of his duties as a ruler and a Hohenzollern this nervous concentration is largely responsible for his incessant activity. "*Toujours en vedette*" is another motto very often quoted by the Emperor in conversation. It is not only the army and navy and the foreign policy of Germany that he steadily and powerfully influences and shapes, but also the arts and the sciences, the commerce and the industry, the press and the pulpit of the Empire. Nothing in the world escapes him. With an alertness and intuitive foresight truly wonderful he seizes upon every advanced step taken anywhere, and if possible he utilizes all new knowledge. He clearly recognizes the force of public sentiment, of that elusive element in politics which Bismarck, the teacher of his early manhood, termed the *imponderabilia* of statecraft. Witness his dispatch to Kruger after the Jameson raid, or, *per contra*, the telegram to Kipling during the latter's illness, and the audience he granted to Cecil Rhodes.

But, while in all these respects he is, in very truth, a thoroughly modern man, he is as pronounced a reactionary, a man of the past, in other essentials. With one foot he stands in the eighteenth century, in the century of Louis XV and absolutism; and with the other he touches the twentieth century, the century of electricity and of an untrammeled press. In his political creed he is his grand-

father's son, not his father's. He is an autocrat by belief, by training, by temperament, and not a constitutional monarch. He wishes to rule as well as to govern. He believes neither in a free people nor a free press. He scorns the good old democratic motto, *Laissez faire, laissez aller;* and he believes in the theory and the practice of his ancestor Frederick William I, viz., to beat his people into happiness and prosperity. He profoundly believes in the Divine Right of kings, and in the providential character of his own mission. He believes, with Charles I, that a monarch can do no wrong, and that he, with all the other rulers by inheritance and Divine Right, is fashioned of a different and better clay than his subjects. He believes in paternalism and enlightened despotism, and not in parliamentary rule, nor in constitutional barriers to his own ambition and his own will. And he believes in all these so thoroughly and firmly that ever since his accession to the throne he has, on many public occasions, given full expression to these beliefs, notwithstanding the fact that the press and the enlightened public opinion of the world, to which in other respects he pays assiduous attention, has condemned, and continues to condemn, such utterances, which from the mouth of an enlightened nation's chief sound doubly monstrous and antiquated.

To quote a few such sayings of the Kaiser's, I will mention his *Suprema lex regis voluntas*, which he wrote into the Golden Book of Munich during a visit there; his "One only is Master within the Empire, and I will tolerate no other," which he proclaimed in the presence of the Rhenish Provincial Chamber; his "My course is the right one, and I shall continue to steer it," which he remarked on February 24, 1892; and in still a stronger form "There is but one law, and that is My law," which he told the recruits in 1893; and his *Sic volo, sic jubeo*, which he wrote in strongly-marked characters under his own portrait, when presenting it to the conference hall in the Ministry of Public Worship in Berlin. These are a few well-authenticated expressions by the Kaiser out of the many of similar import that could be cited. They all breathe the same spirit, the spirit of autocracy.

A very interesting parallel might be drawn between the present Kaiser and his great-uncle on the paternal side, King Frederick William IV, that unfortunate but brilliantly-endowed monarch, who finally died a lingering death from softening of the brain. He loved literature, the arts and science, and he did much to foster them and to draw men of renown to his court. Theoretically, he loved enlightenment in the political life of his people; but in his heart he remained a hide-bound absolutist, who scorned, in 1848, after the political revolution had temporarily been successful throughout Germany and Austria, the Imperial Crown, offered to him solemnly by the spokesmen and elected representatives of the whole nation, simply because this offer was a popular and not a dynastic one. He decried the Prussian constitution, after it had been forced upon him, as a "piece of paper which would come between himself and his people"; but, after the popular uprising in Berlin had been successful, and the fighting in the streets had led to the withdrawal of all the troops from the Prussian capital, this wonderful monarch went with bared head behind the coffins of those carried to burial who had been shot down behind barricades by the regular troops at his own orders. He was an odd character, this great-uncle of the Kaiser, and there are many points of striking resemblance between the two; but, after all, the Kaiser is essentially a man of action, while Frederick William IV was a man of brilliant thought, but of halting and timid action. As to the mental state of the Kaiser, he is, of course, perfectly sane, and all the contradictory features in him may be accounted for by the complexity of his nature, and by his impulsive temperament, which often carries him on the spur of the moment farther than he would go in cooler moments. Sometimes, too, intoxicants acting on a high-strung and naturally nervous constitution, may be responsible for many of the extreme and apparently irrational things that he has said. I have heard now and then, during my residence in Berlin, from the lips of honorable and truthful army officers, remarks of this kind which the Kaiser had made at or after an officers' banquet, which sounded perfectly insane, but which were readily accounted for by the fact that he was flushed with wine.

Another peculiar bent of his mind concerns the Socialists. He has an unreasoning fear and hatred of them. It must be remembered

that in Germany the Socialists are the great bulk of the mechanics, skilled labor, and the best of the whole laboring population, and that they are quiet, law-abiding, peaceable folk, that their political programme today is in the main nothing worse than that of a radical reform party, and that there is a large proportion of them who are even royalists. These Socialists polled at the last general election about 2,170,000 votes, which is about twice the voting strength of any other political party in the Empire. Yet so unreasoning and unreasonable is the antipathy of the Kaiser to this large fraction of the nation that he referred to them in a throne speech as a "horde of men unworthy to bear the name of Germans." He has, on many other occasions, insulted these men and their families in the grossest and most unjust manner, and he has frequently provoked them in a most despicable way. He has harangued regiments, telling them that it would be their duty if there ever was another popular uprising to shoot down the rioters, even if their own mothers, fathers, brothers and sisters were among them. And his courts then sentence some of these same Socialists, when they have said something not quite to the Kaiser's liking, to terms in prison during which many have died. This hatred is constantly whetted and heightened by some of his irresponsible advisers and cronies, and it forms one of the chief hindrances in Germany to a more liberal political era. For the Kaiser needs only to be told that some projected measure is likely to strengthen the Socialist party to condemn that measure. At the root of the paramount influence of that old fossil of mediæval times, the so-called Conservative Party in Prussia, lies nothing more nor less than the Kaiser's fear of a popular uprising under Socialist leadership. For Germany this is most deplorable, since it hinders all political progress, and has weakened liberal political aspirations and movements enormously.

Intimately allied with his incessant fear of the Socialist party, is the Kaiser's blind confidence in his army. Yet at least thirty per cent. of the army is composed of the sons of Socialists, themselves usually already confirmed in that faith. Of the petty officers, too, many are Socialists, or sympathizers with them. There is little doubt that if another political or social revolution should occur in Germany—the chance of such a thing is very small—the army would not play the part of a blind instrument in drowning such an uprising in a deluge of blood. The officers of the army today are different from the officers of fifteen years ago. Formerly the great majority of them came from the ranks of the nobility. Now about seventy per cent. of them are the sons of plain, though well-to-do, citizens. The Kaiser for a time tried to stem this rising influx of what he considered "undesirable elements," but he had to yield in the end, for with the increasing poverty of the ruling castes, and with the army doubled in size since 1870, there is no remedy.

The Emperor has a strong dislike of the press. It is mainly owing to his own influence that that very modest measure of comparative liberty which the German press enjoyed under his grandfather and his father has been curtailed, until even the semblance of it has almost disappeared. This, it may be well to say, is really contrary to the constitution both of the Empire and of Prussia, but unfortunately the current of political thought in Germany during the past decade has favored and facilitated this systematic suppression of the press. The courts all over Germany have assumed more and more an attitude of downright hostility, and the practice of the highest judiciary, the Imperial Court in Leipzig, has for years been unfair, even almost revolutionary. Judges and lawyers themselves have strenuously and persistently protested against the rising tide of reactionism. The principal reason for the Emperor's antipathy to the press is his personal experience, especially during the first five years of his reign, when public opinion was considerably prejudiced against him, and when a great deal of bitter and unfair criticism was hurled at his head. It so happens that the Kaiser is inordinately vain, and extremely susceptible to criticism, and impatient of it. He fears and hates particularly the English and the American press because it exerts an enormous influence upon the opinion of the world, his own country included, and is outspoken and energetic. The French papers he cares little about, because their political opinions on any non-French topics or persons are held of little account outside of France. Then, too, the French have for a long time had a sort of sneaking regard for him. Besides, no German

Emperor has the right to expect anything but abuse from his hereditary foe. The German press is securely and effectually muzzled, and the few editors or correspondents who now and then kick over the traces are silenced. The rest of the European press does not count for much, but the English and the American press, powerful, wealthy, enterprising and fearless, has always been a great thorn in his side. He minds the English leading papers more, of course, than the American, for obvious reasons. But of late, since the United States has developed an unexpected military, naval and political strength and commercial supremacy, he devotes much greater attention to its press than he formerly did.

How does the Kaiser regard the United States? He is neither an especial friend of this nation nor is he its inveterate foe which, since the spring of 1898, a large portion of the American press have represented him, and a large part of the American people believed him to be. He learned from Bismarck a lesson or two—this among others, that a statesman must reckon with concrete facts, however unpalatable. The war with Spain showed the United States much stronger than the Kaiser or anybody else in Europe had any idea of. Moreover, the dominant party in the United States stands committed to a policy of expansion, political and commercial; this fact was fully and at an early date recognized by the Emperor, and he has since shaped his own policy accordingly. He now earnestly seeks a *rapprochement*. His sending his brother over here is but the latest and most striking proof. Yet it is quite natural that he should not like the American. A man of his political views, believing in a government by Divine Right, in a strong government based on the army and on the inherited prerogative of the privileged castes to rule, cannot sincerely like a government which is of the people, by the people and for the people. The Kaiser and the upper and ruling classes in Germany look upon the United States as little better than a "mob government."

I collected, during my stay in Berlin, a few authentic utterances made by the Kaiser about this country. To the late General Runyon, then United States ambassador in Berlin, he once said: "Such a pushing people as the Americans will sooner or later clash with others, but let us hope never with Germany."

To Ambassador White he said: "America is a country of contrasts—piercing lights and deep shadows." And on another occasion: "I know there are many things my Germans might learn from the American people, above all, their optimism, their almost naïve enthusiasm, and unquenchable energy."

To the late ex-President Harrison he said in the course of an hour's conversation: "Your whole country is an experiment—an intensely interesting one, I admit, but still an experiment. Whether it will stand the storms of time as the older monarchies of Europe have done, remains still to be seen."

To the same: "One of the doubtful features of American life is its lack of national cohesion and homogeneity—you're a conglomerate, a bubbling caldron."

To the same: "Such seething party politics as yours are not conducive to a calm, well-balanced public opinion."

These remarks are interesting enough, some of them, but taken altogether they hardly show enthusiasm for democratic institutions. The Kaiser, indeed, has affection and cordial good wishes for only one other nation than his own and that is the English. His English blood, the strong English influences and family ties felt all his life, and his many visits to England easily account for this interest. He once said in speaking of the English: "Blood is thicker than water." But the English free press he does not like, as witness two sayings of his to Sir Frank Lascelles, the British ambassador in Berlin: "An unbridled press is a curse for any nation—liberty does not mean license," and on another occasion: "Scribblers and libelers are not journalists."

To Count Szoegenyi, the Austrian ambassador, he expressed some harsh criticism of parliamentarism. He spoke of the recent violent scenes in the Reichsrath in Vienna, as "Parliamentarism run to seed," and again, "Parliamentarism is a double-edged sword which nowadays seems to do more harm than good." And again, "It's not talk-talk-talk, but do-do-do that legislative bodies ought to be chiefly engaged in."

And to Count Osten-Sacken, the Russian ambassador, he said: "After all, it's the monarch alone who gives stability to a nation's politics." And on another occasion: "Monarchy like ours in Prussia is, in critical times, the nation's sole salvation."

THE FACTORY FOR ALL: ALL FOR THE FACTORY"

A STUDY OF A DUTCH WELFARE INDUSTRY

BY

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The illustrations for this article were taken under the direction of the author and selected from the Industrial Betterment Department of the League for Social Service

NOT far from the quaint and historic town of Delft, in Holland, is one of the most interesting industrial towns in the world. Until a few years ago it was a low-lying tract of nearly deserted land. In 1870, Mr. J. C. Van Marken with some thirty assistants began the manufacture of yeast and spirits there. Today he employs thirteen hundred people, and Agneta Park, as he named the place, is a veritable garden spot. Mr. Van Marken is more than a successful manufacturer. He has always been deeply interested in the problem of bringing into closer touch and sympathy the men who furnish the capital and the men who do the work. As a result he has tried, and he has worked out to a successful end, many plans for such community of interest. He began by building for the workmen one hundred picturesque cottages with small gardens attached. They were small and the newer constructions will be larger, but they served. The people showed Dutch thrift in the way they made use of every inch of ground. Vines and flowers, dove cotes and chicken coops, tiny as bird cages, filled every available space. Kindergartens and schools were prepared for the children, in whom Mrs. Van Marken took particular interest, encouraging the scholars with frequent visits and offers of prizes for good work. Gradually the town was built up as the needs of the factory grew, and other plans were carried out.

The largest building in the park is the community house, with accommodations for twelve hundred people in its large hall, which can be subdivided by an ingenious system of partitions into six smaller rooms. Here are held the flower shows in summer, band concerts three times a week in the winter, dances, lectures and social gatherings. The principal decorations of the hall are the banners emblematic of the different departments in the factory; thus the carpenters, the engineers and the machinists have their different devices, while in a prominent position draping the stage is the large flag of the establishment with its motto, "The Factory for All: All for the Factory." On festivals, State occasions, and especially on Community Day, these banners are carried in the procession, typifying the coöperative spirit animating each department. One room is a repository for games, and a stereopticon with slides, which are loaned for an evening's use at home entertainments. The gymnasium appeals to the young men; it is equipped with all the latest appliances to prepare them for the sports and contests which take place on the three holidays given by the firm, when the village assembles to witness the different athletic contests in rowing, archery, bowls, skating and fencing. The children are not neglected; adjoining the community house is their playground, filled with swings, teeters, merry-go-rounds and sand-heaps, with a pavilion for rainy weather.

Mr. Van Marken has established a premium system by which a classification is made, according to zeal and devotion to work, based on five classes, viz.: *sufficient, pretty good, good, very good, excellent.* Class one receives no premium; class two, two per cent. of the wages; class three, five per cent.; class four, ten per cent. and class five, twenty per cent. No workman can be promoted more than one class in one year. The directors decide the classification upon quarterly reports made by

the foremen and superintendents. Each workman begins in the first class; if at the end of the first year he does not reach the grade "pretty good" he is given one more year to recover himself and to reach the third class, "good"; failing this he is discharged. In determining the respective grades the foreman is first called upon for his report. For example, Mr. Van Marken will ask his foreman what he thinks of Meyer and learns that he is a very honest fellow.

"Has he devotion for his work?" The foreman hesitating, Mr. Van Marken continues: "Does he do his best? Is he industrious? Does he put his heart into his work? Can you rely on him?"

"Certainly," the foreman replies.

"Very well, then," says Mr. Van Marken. "Shall we mark him 'excellent'?"

"No, I can hardly say that; we have better workmen."

"And some worse?" queries Mr. Van Marken.

"Certainly, he is a good deal better than Klaus."

"Well, then," continues Mr. Van Marken, "he seems to be of good average quality."

"That's just it," said the foreman. "There are better workmen, but if we had none worse in the factory you would be satisfied."

Based on this report of the foreman the directors assign him to class three, with the rank "good" entitling him to five per cent. premium. After the foreman gives his opinion the assistant foreman, the superintendent and the chief each in turn are consulted, so that the final verdict pronounced by the directors must do justice to the workmen, whereby any personal dislike toward a workman is counteracted. This plan is a direct stimulus for the men to take a personal interest in their work and to prevent them from doing the minimum amount that will be accepted. Then, too, there is a premium for "team work," that is, those working in groups who show a spirit of coöperation with their fellows, independent of devotion or ability, receive a premium.

For the promotion of thrift a savings bank for voluntary deposits was opened, and pays interest at the rate of five per cent. Savings may be withdrawn at any time. Then there is also an obligatory savings bank, "to prevent the unmarried workmen, especially in their younger days, from contracting habits of spending, which when they may have married would clash with the interests of their families." It is a part of the object to provide savings for exceptional needs like marriages, births and illness. Then, too, a part of the premiums are deducted and placed to the individual credit, except those who have four or more children under fifteen. They receive the premiums in full.

The following scale of deductions are made:

	Per Cent.
Married men with 3 children under 15	10
" " " 2 " " 15	20
" " " 1 child " "	30
" " " no children " "	40
Bachelors over 23 years of age	50
Bachelors from 18 to 23 years of age	75
Bachelors under 18 years of age	90

This capital paid in premiums is the property of the individual depositor, and is paid him in full when he reaches the age of sixty or whenever he leaves the service of the company. Any workman may withdraw on the occasion of his marriage a sum equal to twenty-five weeks' salary and on the birth of a child the equivalent of two weeks' salary; four per cent. per annum interest is allowed. There are the usual plans for sick benefit funds and insurance payable at death.

Mr. Van Marken is a firm believer in the recognition of the labor element in the business, as well as of capital and management. Accordingly in 1875, he began what might be called a Labor Chamber, composed of the engineers, chief clerks and foremen. This body was consultative and might be summoned at the request of the directors or the workingmen, but after a fair trial it was found to be unwieldy and that there was not that freedom of speech which had been desired, as the presence of superiors tended to embarrass the representatives from the rank and file. In 1895, a modification of this plan was begun, in the establishment of a Labor Parliament with three houses; one composed of twelve members from the managers, engineers and chief clerks; the second of eight from the foremen and clerks; the third of sixteen men below the rank of foremen or clerks. The eight delegates to the second house are the two eldest in service and six others elected from their own grade; those from the third house are the four eldest in service and twelve elected by their fellows. The first house meets quarterly, the second monthly and the third semi-monthly. Each house elects a

RAPID TRANSIT IN THE PARK

AN EMPLOYEE'S FRONT YARD

president and a secretary, the latter official receiving a salary of 100 florins a year. All the members of the third house receive an annual compensation of twenty-six florins to reimburse them for the loss of their working time.

To guard against overlapping the clearing-house principle was introduced in the United Committee composed of four branches, dealing with matters of recreation, education, finance and the furtherance of material interests. The executive management is vested in a director who is responsible to the firm, while the democratic principle is introduced in the organization of as many subcommittees as may be desirable, each in charge of one of the factory people. In this way confidence is established at once and real service is rendered to those most in need of it. For example, the branch dealing with material interests concerns itself with the provision of the best and lowest priced food stuffs and clothing through the two village cooperative stores; they advise regarding the best use of the savings and thrift funds which the family may have accumulated and they concern themselves in explaining the various regulations concerning the prevention of accidents in the factory, as well as giving advice on sanitation and hygiene in the home. To give an idea of the extent and the diversity of these departments, that of recreation has sub-committees on the following subjects: musical education and concerts, choral society, gymnastics, skating and rowing, bicycling, stereopticon entertainments, lectures, dancing, home recreation, receptions, factory holidays, skittles, archery, billiards, and Agneta Park; and it has also travel clubs.

MR. VAN MARKEN AT THE ENTRANCE TO HIS OFFICE
The office adjoins his home. Mrs. Van Marken is at the drawing room window

An order of industrial merit has been instituted with the decoration of a gold cross, which is presented on the anniversary festival to every employee who has completed twenty-five years of service in Mr. Van Marken's employ. The names are inscribed in the Golden Book, as it is called, consisting of large pages mounted on a winged frame, thus honoring the workmen in their own community and bringing their names to the notice of visitors from other communities.

Mr. Van Marken is constantly scheming to

"RUST—ROIST" (Rest is Rust)
Van Marken's villa in Agneta Park is in the midst of the homes of his employees

improve and add to the betterment institutions. This Dutch factory is typical of many European industries where welfare movements are being worked out logically and with mutual satisfaction. America also is catching the glow of this higher industrialism, and the next step toward the realization in this country, will be to make use of this European experience, adapting it to local needs and conditions.

AN AGNETA PARK BACK YARD

JAMES B. DILL

THE ORGANIZER OF 700 CORPORATIONS—HOW TACT, GOOD JUDGMENT AND EXECUTIVE SKILL WON AN UP-HILL FIGHT—A MAN OF INDOMITABLE PLUCK

BY

WILLIAM JUSTUS BOIES

OUT of the hurrying, bustling throng in New York's financial district a short, compactly built man with a large head and keen eyes may be seen walking briskly down Pine Street every morning about ten. He enters the tall building the other side of the Sub-Treasury and within thirty seconds alights from the elevator at the twelfth story, where his name, James B. Dill, appears in modest letters on the door. The day's routine which follows is not unlike that of dozens of other corporation lawyers, spent in settling questions that involve millions of dollars, meeting powerful men and subduing them and putting them into line to obtain the best results. And in Mr. Dill's office it is all done quietly, without evident effort, but done it is in its entirety before it is allowed to pass from his mind. Late in the day he calls a stenographer, and paces a quarter-mile or so about his office floor delivering his opinion in short, jerky sentences. He works very rapidly, often taking a case in the morning and settling it by night.

Mr. Dill enjoys the distinction of having organized more corporations than any other lawyer in the United States. He has drafted, wholly or in part, the charters of more than seven hundred corporations, is a director in forty-two and the author of various works on corporation law. His efforts have made him known as the foremost "corporation architect" of the country, and have given him a large fortune. But long association with rich men has not dimmed for him the point of view of his college days, when he walked New Haven streets with newspapers stuffed under his waistcoat to keep out the cold. He was too poor to buy an overcoat. His life story is thrilling in its recital of early struggles and hard-won success.

Mr. Dill has a genius for hitting the nail on the head. To him plain words constitute the only language fit for the use of millionaires. Others may trifle with facts, but the man of vast interests has to learn "what's what" in the world of corporate responsibility. For that reason he never fails to say "no" to an unsound proposition, even when a "yes" might mean the organization of a $10,000,000 company and a $10,000 fee. And his "no" has no uncertain sound to appease unwilling ears. It goes home like a shot, but without offense, for just then the keen eyes twinkle and you see what a fool you have been. The experience makes lawyer and client fast friends.

As one who knows him said: "Dill is a specialist in common sense. His directness in reaching the bottom of things and grasping instantly the various points of a difficult proposition surpasses anything I have ever seen in a great practitioner. His efforts are invariably on the side of peace, if war can be honorably avoided, and in a single instance that I know of he made a dozen lawyers pretty angry by settling a big suit before they pulled out of it anything more than their retaining fees. But his clients appreciated it, and look back now on the amount paid him as a good investment. As a matter of fact, what he received, although twice as much as most lawyers collect in five years, was scarcely a tenth of the sum his clients saved. That largely accounts for the success of the man: he always contrives to let his clients make a great deal more than he does."

When Mr. Dill was admitted to the bar in 1878 he had just forty dollars in the bank. Within a few years he had accumulated a competency, and two years ago he received for two weeks' work the largest single fee ever paid to a lawyer in this country—said to have been more than $1,000,000.

But that did not seem much more to him in those days than the eleven dollars that he received for his first victory in a justice's court. That case engaged the attention of four lawyers, required three hearings and was finally settled by reference to Cushing's Manual, with which the country squire was familiar.

After encountering the vicissitudes usual to young lawyers who were trying to attract clients to cubby-hole offices on the top floors of big New York buildings, young Dill was retained in the case that gave him his start and marked the turning point in his professional career. It was found that the directors of the McKillop & Sprague Commercial Agency had neglected to file certain statements required by law and were therefore liable for the debts of the concern that had failed. All the directors were beaten in defending the suits brought against them except Dill's client, whose release was secured by the young lawyer on a technicality. That case attracted wide attention and confirmed him in his determination to devote himself to corporation practice. The next year the Legislature corrected the defect in the law on which his victory was based.

Dill then hit on the idea which gave him money and renown. He saw that business development had outgrown the partnership device for managing vast enterprises, and that the era of industrial consolidations was at hand. He bent all his energies to master the intricacies of corporate enterprise, and went into the business of organizing companies. Then he published one of the first treatises on the subject that had a wide circulation, for his pamphlet concerning "The Advantages of Business Corporations" carried his name everywhere. About that time Governor Abbot of New Jersey asked Mr. Dill what he should do to increase the revenues of the State, and the lawyer suggested that the laws be so broadened as to make it advantageous for corporations to locate there. At a subsequent conference between Governor Abbot, Secretary of State Kelsey, United States District Attorney White and Mr. Allan McDermott, Mr. Dill gave his views in detail. Steps were then taken to bring about the amendments which leaders of both political parties gladly agreed to. This was in 1890.

Two years later, at Mr. Dill's suggestion, the State adopted the Corporation Registration Law, which gave New Jersey companies the protection guaranteed under the English system. This was the most radical step yet taken by an American commonwealth. The act required all corporations to have an agent, and to state the name of an agent in their charter; that the agent should be authorized to receive papers for the corporation, and that the agent's address should be the post-office address of the directors and stockholders for the purpose of sending legal notices; and providing that at the agent's office should be kept all stock and transfer books for the inspection of stockholders. Before that New Jersey was open to the charge of creating tramp organizations. It was difficult to identify irresponsible concerns, because no one could tell just where they were located. But with the publication of the corporation directory, issued by the Secretary of State, giving the list of all chartered companies, date of their incorporation, under what law incorporated and amount of capital paid in, "wild-cat" companies were shut out.

Another amendment made a charter essentially equivalent to a special act of the Legislature. This gave the corporation lawyer his chance, for charter drawing, instead of a prescribed form, became a matter of infinite skill. Hundreds of corporations took out charters, the new law guaranteeing them entire freedom of action, providing they did not ignore the obligations of "private publicity." That meant no blind pools, and no special privileges for a few to the detriment of many. These provisions in important charters drafted by Mr. Dill formulate the safeguards of "private publicity" and furnish absolute protection for the stockholders:

> The company and its directors and managers thereof shall cause to be kept proper books of account, in which shall be kept full, true and complete accounts of the affairs and transactions of the company; and shall once at least in each year, and at intervals of not more than twelve months, cause the accounts of the company to be balanced and a shareholders' balance sheet to be prepared; shall cause a copy of such shareholders' balance sheet to be laid before the stockholders at the annual meeting, and a copy to be deposited at the registered office of the company for the inspection of the stockholders in person during a period of at least seven days before the meeting.

The shareholders' balance sheet shall be in such form as may be from time to time directed by the stockholders, and shall in every case contain the amount of the capital issued and the amount paid up thereon, distinguishing the amount of capital paid up in money and the amount paid up otherwise than in money, and the arrears, if any, of calls due; the amount of debts due by the company, distinguishing the amount of mortgages and lien charges upon the general assets of the company; the amount of debts due the company after making a proper deduction for debts considered to be bad or doubtful; the actual amount of surplus (if any) and the nature and mode in which it is used and invested; and the amount by which the gross value of the assets of the company has been increased since the last balance sheet in consequence of any increase in the valuations of real or personal property belonging to the company.

During the great steel fight of 1900, when Messrs. Carnegie and Frick were at odds, Mr. Dill got the chance that come to few men. He was ready for it. Word reached New York that papers in the celebrated suit had been drawn, and that Wall Street would be shaken by unexpected disclosures. Financiers became very anxious, well knowing that such hostilities meant general commercial disturbance. A conference was called at Atlantic City. Mr. Dill was summoned. In the words of an attendant at that memorable meeting: "Dill took in the situation at a glance. Going straight to Mr. Carnegie, Dill asked him to write out his views and note what he wanted. He did so. Mr. Frick did the same thing. Taking both memoranda, Mr. Dill locked himself in his room and did some hard thinking. Brushing aside non-essentials, he busied himself with what was vital. Then he got both gentlemen to agree to let him settle the dispute and within a few days he showed each how the company could be reorganized on lines satisfactory to all. It meant several millions more for both Mr. Carnegie and Mr. Frick; so Mr. Dill's suggestion was accepted as the solution of a very difficult problem. Had the fight continued and the whole matter been rehearsed in the courts, no one knows how serious the consequences might have been."

President Hadley of Yale University said to me, of his old classmate: "Dill was a man of boundless energy, who, when he was downed in one place, would bob up in another. I remember that he had a prominent position as tenor in the college choir; and possibly his efforts in making the members of that body get together when they had been inclined to sing different parts of the tune on independent methods may have proved useful on a larger scale in his subsequent career." Sharp, quick and impulsive, winning in manner and speech, with a large heart and a level head, of course he is a prodigious worker. But he takes life quietly, for he has learned how to let go as well as how to take hold. That accounts for his poise and willingness to await the critical moment. He is ever in fighting trim, and whenever he is unjustly opposed, he knows the "sledge-hammer motion" for striking hard unflinching blows.

Mr. Dill is a man of simple tastes. Notwithstanding his varied interests, and the charms of New York life, he prefers the four o'clock train for East Orange to the best dinner that Fifth Avenue can serve. As soon as his front door shuts behind him he drops his office reserve, and the stern lawyer becomes a boy again. To see the man at his best you must happen in upon him at his house. The beautiful library in his East Orange house is the gathering place for big men. Great industrial consolidations have been planned there.

Mr. Dill takes a keen interest in young men. More than one boy owes his college training to the lawyer's generosity. One of the pleasantest stories told in Wall Street concerns the difficulties of a young man who became heavily involved through unfortunate speculation. He had taken a "flier" in the market at the wrong time, and his account showed a heavy debit balance. His brokers were threatening various embarrassments if $700 was not paid immediately. The young man became desperate. He had nothing in the bank and no friend to turn to. Knowing Mr. Dill slightly, he finally decided to lay the facts before him. He did so. On hearing his story, the brokers were asked for a statement of the transactions. When that was submitted Mr. Dill gave the youth some fatherly advice and loaned him the amount. It saved a life from shipwreck, for the young man took fresh courage and is now successful. On another occasion Mr. Dill was visiting a college town. While walking with a professor he noticed one day an athletic youth with a

good head and a keen eye. Struck with the young man's appearance, he inquired about him and found that he was working his way through college. Mr. Dill had a word with him and passed on. He sent for him the next day and offered him eighty dollars a month while he was studying law. The young man will soon be admitted to his firm.

Now as to the other half of his life. The son of a Congregational clergyman, settled in a country village near Rochester, Mr. Dill encountered the hardships that stiffened his backbone, and prepared him for the struggle through college and the difficulties of gaining the bar. After graduating at Yale in 1876, at the age of twenty-one, he taught school in Philadelphia for a year where he had the choice of occupying comfortable quarters in the school building and looking after the boys at night or rooming over a stable where he would have his evenings free. He chose the latter and there commenced his legal studies under the direction of E. Cope Mitchell, a noted equity lawyer. A year later he became instructor in Latin and Mathematics at Stevens Institute, Hoboken, and entered the senior class of the New York University Law School graduating as salutatorian in 1878. He was admitted to practice that year and thereupon began his strenuous career.

THE REAL SOUTHERN QUESTION

A REVOLUTION IN ISOLATED COUNTRY LIFE MADE POSSIBLE BY MODEL SCHOOLS WHERE HOME INDUSTRIES AND HANDICRAFTS ARE TAUGHT — FARM COMMUNES ABOUT SCHOOL-HOUSES — THE DESPERATE EARNESTNESS OF THE GEORGIA STATE NORMAL SCHOOL

BY

EUGENE C. BRANSON

PRESIDENT OF THE STATE NORMAL SCHOOL OF GEORGIA

THERE are in Georgia only thirty-seven persons per square mile. It takes, therefore, an area of about twenty square miles to supply enough children for a white school and a Negro school. In fact it takes a larger area than this, because only forty per cent. of the children are in school at all for as long a period as one hundred days of the year. Eight-ninths of the school children of the State live in the rural districts. The school problem of Georgia and of every other Southern State is preëminently the country-school problem.

Now there was a time when the plantation was a sort of farming commune. The "big" house was the centre of patriarchal government and of social order and civilization. The Negro learned the farm arts and crafts, but he did not learn individual self-rule, business initiative, pride in the ownership of property, or joy in the creation of a home for himself. General Armstrong in his wisdom saw very clearly that any scheme of education for the Negro must preserve for him the best results of slavery, save him as far as possible from the evils of a sudden freedom and prepare him to work out his own salvation—and to do it in safety alongside his white neighbor. No man is in doubt about the vital significance of the work going on at Hampton and at Tuskegee and elsewhere in similar schools throughout the South.

But what about the dependent white classes? What is to become of them? The cities grow at the expense of the rural districts—indeed, the rate of increase of urban population in the eleven Southern States is greater than the average urban increase for the whole country. The Negroes have flocked into the cities—unfortunately, alike for the Negroes and for the cities. Ambitious white families have abandoned farm life and gone to town for two reasons: first, to educate their children and to take advantage of the larger op-

portunities for money-making; and second, to escape the danger to their families of nameless crimes of violence by the worst class of Negroes. Eighty-seven per cent. of the penitentiary convicts in Georgia are common laborers and farm hands, and twenty-five per cent. of them are less than twenty-one years old. Nearly one-third of the voters of the State are illiterate. These conditions are worse in at least four other Southern States.

The country regions, always sparsely populated, are therefore becoming still more sparsely populated. Of course, this means that Southern civilization is gradually changing its character from agricultural and rural to industrial and urban. Farm properties are gradually being abandoned because of hardships, dangers, and unprofitableness.

What is to become of the families left in the country? A million people live in one-room cabins in Georgia in primitive conditions that beggar imagination. You do not know the Georgia Cracker until you see him in his native place—on the edge of a small clearing, with a cotton patch on one side, a pine forest behind him, and a reed thicket or a gallberry swamp in the direction of his spring. There he lives in solitude unbroken except for a trip to town on court Mondays, sale Tuesdays and circus days. To be sure, once a month he goes to the country meeting-house. Southern civilization must for all time be preëminently an agricultural civilization. Nature has determined that. Industrial life and enterprise increase at an accelerating ratio, but the agricultural wealth of the South must always be its chief wealth. It would be very foolish to abandon the kind of civilization which at its best is safe and sound, wholesome and healthful, even if it could be abandoned.

In the overcrowded centres of population, where the breath of man seems to be so fatal to his fellows, we have one social problem. In the isolation of farm life in the South we have another. Isolation means social degeneracy and decay. Abandon an Albemarle pippin for a few generations until the blackjacks and scrub pines grow up about it, and it soon produces crab apples. And it is a kind of crab-apple civilization that we are threatened with in the South. What is to be done about it? I believe the remedy lies, not in education in its common meaning, but in the right kind of education.

No scheme of education can justify itself which is not related directly and helpfully to the social and economic needs of community life.

The greatest need of agricultural life in the South today is farming communes, and there must be natural forces that will bring the country people together in such communes in wholesome ways. Farm communes, good roads, smaller farms, intensive farming, rotation of crops, and such remunerative household industries as are to be found everywhere in the homes of the peasantry upon the continent of Europe, good schools, libraries—these are the fundamental needs. Of course, I believe in the supreme value of wholesome religious instruction; but I also believe that effective home-mission work will need to make every church both a Sunday-school and a day-school, where head, heart and hand, taste, conscience and will are all continually stimulated to activity.

The right kind of school seems to be the only possible force to bring such a result. Southern civilization will need to be built around the schoolhouse, and we shall need to steer clear, if possible, of the mistakes of other sections of the country. The herding instinct, a racial instinct among some other peoples, seems almost absent in the farming classes of the South. If, therefore, we can gradually set up in every farm community a well-ordered school, where ordinary academic instruction is intelligently given, and where at the same time some of the long hours of the school day are given to such forms of handicraft as can easily be transferred to the homes of the community and become a source of occupation and income; and if, in addition, nature studies, school libraries, mothers' clubs and village industries of all sorts gradually come into existence, then we shall have a different kind of country village in the South. As a rule, country civilization has been built around the cross-roads store, and often the barroom has been an adjunct to this store.

When I speak of school handicrafts I do not mean some of the forms of manual training that are now exploited in school circles; but I do mean such forms of school occupation as basket-weaving, rug-weaving, needlework and the making of native grasses and long-leaf pine needles into articles of use and taste for the market. Wood carving, clay

modeling, pottery making, the making of summer hats out of shucks, artificial flowers and feather work are other forms of school industry that can be transferred to the homes, where they may become remunerative domestic occupations. Such forms of handicraft are to be found in the homes of the peasantry in every country of Europe. Household and village industries are everywhere needed in the South.

The people have been so overwhelmed by the raw conditions of a country civilization that they have lost their original tendency toward the native hereditary arts that have been developed by all other civilizations. The bare necessities of work on the farm and in the country home have fashioned their fingers to rude conditions; so that comfort, invention and taste are hardly anywhere in evidence in the home of the tenant farmer of the South With the man in the Bible he says, "Four months and then cometh the harvest." Heaven only knows what he does with the other eight months. He needs intelligent and tasteful occupation as much as he needs education. He is a sad-faced fellow as a rule. He needs profitable occupation to develop cheerfulness.

The State Normal School of Georgia has taken stock of these conditions as thoughtfully as it can, and its efforts are bent toward such an education of the common-school teacher as will fit him to set up a school that can be a safe unit of aggregation for the country civilization of Georgia. The students of this school number more than six hundred a year, and they come from the middle classes as a rule. Nine out of every ten have already been teachers in the common schools of the State, where they earn on an average $27 per month. They stay in this school during their long seven months of vacation, or for so much of it as their meagre savings will permit. It is a unique student body. Their ages range from seventeen to sixty. One year there were more than forty teachers in the school who were past forty years of age and a half-dozen who were more than fifty. Widows come, bringing their children; even the old Confederate soldier has hobbled into the school on his crutches. Young people, old maids, old bachelors, widows and even grandmothers a student body not paralleled elsewhere, in the world. Tuition, of course, is there are no fees of any sort. Life in the dormitory is upon the coöperative plan and the cost of living never exceeds $8 a month. This sum pays for food, fuel, lights, laundry, servants and the salaries of the housekeeper and the matron. The courses of study are arranged in terms of ten weeks throughout a period of three years.

The stories of heroism of some of these students, ninety-five per cent. of whom are self-supporting, are dramatic. One young girl has been supported by a brother paralyzed on one side, who, year after year, has ploughed with one hand to pay her way. The eagerness with which she has worked to fit herself to teach and to relieve his burden is pathetic. Scores of these young women have chopped cotton and split corn "middles" and undergone all manner of hardships in field work. They have learned in some way enough to obtain a license to teach, and with their first earnings they have flocked to this school for a better preparation. One young woman has for years managed a small tenant farm for her invalid mother. She has taken the place of the dead father, looked after the younger children, cultivated the farm, taught the country school, and during her vacations as a teacher she comes to the State Normal School for further training.

Thirty scholarships have been established for deserving young women by generous citizens of Georgia. The other day a gentleman saw a young woman in the cotton field who was the oldest of a family of six daughters, a bright-eyed, anxious young girl who had managed in some way to get the most and best out of the country schools in her neighborhood. Next year she will enter this school on a scholarship established for her by this gentleman. Only last week a raw country lad rode to the school with all of his possessions on his back, except the raw-boned horse under him. He had managed to save in his life on the farm the value of one bag of cotton and the horse he rode. He proposes to turn all his worldly goods over to the school and to work his way through. This is the sort of start in life that Senator Joe Brown had.

The normal school thus keeps in direct touch with the country schools of the State. Its student body is composed for the most part of the teachers in these schools. They come heart-sick and heart-hungry for something more than they know and something better

than they are. The faculty does not need to worry about their application; the chief concern is to protect them against the danger of working too much. They are struggling with the desperation of drowning men and women. The school is now seven years old, but the State has given it only $7,000 for building purposes, and most of the building has been done out of the legislative appropriations for bare maintenance. For three years the salaries of the faculty were reduced in order to secure money for necessary buildings. Although there are six hundred students, there are only four small recitation rooms for college work; and the faculty of fourteen use these four rooms practically all day.

As an evidence of the furious intensity of purpose in the school, a library of 4,450 volumes has been collected this year by the combined work of students and faculty—all without a cent of cost to the State. The school insists upon the creation of school libraries in every community of the State. The students have watched every step in the creation of this library out of nothing; and they have gone out all over the State determined to do the same thing in every community where they teach.

They are intensely interested also in the forms of handicraft taught in the school. Thousands of articles of use and beauty have been made here this year out of materials which go to waste on every farm. For instance, corn shucks are worth about one dollar a hundred pounds. Two ounces of shucks make a tasteful and durable woman's hat which sells for seventy-five cents. A pound of shucks makes six dollars' worth of hats. A young girl in a neighboring county has made and sold more than two hundred dollars' worth of shuck hats this year. It is worth while for the teachers to introduce these forms of work into their schools. It will mean a utilization of talents, opportunities and materials, which now all go to waste on our farms.

Some time ago, at my suggestion, Mrs. J. Lindsay Johnson, president of the Federation of Women's Clubs in the State, sent a circular letter to the County School Commissioners offering to supplement the funds that may be raised by any county to establish model rural schools. The plan is to enlist the active interest of as many people and classes of people as possible. It is not their purpose to make these schools a charity, for the Georgia countryman has nothing of the spirit of mendicancy. He will accept no charities. But the clubwomen have tempted him to do as much for himself as possible, and then they propose to work along with him in setting up model rural schools, county by county, throughout the State. Fifteen or twenty counties responded immediately. Madison County made the largest cash offer, and the first of these schools has been established at Danielsville. A graduate of the University of Georgia, a graduate of Oread Institute, Massachusetts, and a graduate of the Teachers' College, New York, have been engaged to teach it—all persons of Southern rearing. The common school subjects will be taught, of course. But cooking, the cultivation of a school garden, a half-dozen forms of remunerative handicrafts, a school library, a mothers' club and a fortnightly institute for the other teachers of the county will be some of the features of this school. Other schools of this sort will be established as fast as possible, and it is hoped that every county in the State will have one sooner or later. This revolutionary task can be accomplished without any help except the encouragement which will instigate the people themselves to do the most and the best that it is possible for them to do for themselves.

Since this article was put in type the author of it has written in a private letter:

"I am here in the woods, eight miles from the railroad, organizing a model country school that the Women's Clubs of the State have mothered. We have got nearly $1,000 out of this little village of 200 people for this school. Do you know of any more effective way to induce a community to help itself forward? We have a three-roomed schoolhouse, weather-boarded and equipped with modern furniture. We are building an adjunct for cooking and shop work. I've promised to secure—Heaven knows how—forty gallons of white paint for the weather boarding and the ceiling. We opened the school yesterday with eighty-six pupils, and every mother and father in a radius of five miles was here. It was a 'revival' occasion. Everybody 'got happy' and 'shouted' over his boys and girls."

WHAT WE READ

BY

JOHN COTTON DANA

LIBRARIAN OF THE NEWARK (N. J.) FREE PUBLIC LIBRARY.

ABOUT 4,500 new books are published in the United States every year and the total number of copies issued and sold is perhaps 10,000,000; but the intellectual food of the mass of the people is, after all, not books so much as newspapers and periodicals. I have made a computation of the number of people who do any reading at all and of the number of newspapers read in the United States every year, together with a classification of the subjects treated—with somewhat startling results. In considering the gross amount of newspaper reading, I estimate one-and-a-half readers to every copy of a periodical. Even computing thus, the number of journal readers among our seventy-five million people is smaller than is usually supposed.

From the total population deduct children under fourteen, illiterates and a few other small non-reading classes, and there remain about 40,000,000 adults who could read periodicals if they would. About four billion separate copies of periodicals of all kinds are printed in this country every year, one hundred to each possible reader. But many, probably a large majority of the people who work in mills, mines, factories and on farms read very little, though a goodly proportion read something. On the other hand, the professional and managing classes read many more than a hundred a year. Any reader of this article who runs over a brief list of his more intimate friends, will find each reads, if only hastily, between three hundred and a thousand. Instead, then, of having forty million people reading one hundred periodicals in a year, we have probably not more than half that number reading on an average twice as many.

From the directories of newspapers and other periodicals of the United States, I have compiled the statistics given in the following tables. They show how many dailies, weeklies and monthlies are published in this country. Journals published at other intervals are reduced to the weekly or monthly rate. They show also how many copies of the periodicals in each of these classes are issued in a year. Furthermore, from among the many newspapers I selected a few as fairly typical and took one copy of each of these few, of a date when no unusual amount of space was given to any special topic. I analyzed the contents of these typical newspapers and, having made allowance for the space taken by illustrations, by display advertisements and by display headings, I tabulated them in accordance with the schedules given. The analysis is only tentative of course; an analysis of another group of papers published on different dates would show different results. But the difference would appear, I believe, rather in minor details than in the general outlines.

Reducing the contents of these newspapers to volumes of the size of "David Harum," we have in a special column a statement of the number of volumes of the size of "David Harum" which are published in newspaper form every year, on the several subjects indicated. In still another table I have put the results of my inquiries in another form, grouping the thirty-two topics of the first table, and reducing thereby the number of classes to five. Again putting, in imagination, the contents of the newspapers of a year into volumes of the size of "David Harum," we have an estimate of the number of volumes on each of these broader topics read by the people of the United States every year.

The weekly papers are included in this general analysis. They put forth in a year 1,208,000,000 copies. Among them are a large number of periodicals not newspapers proper, humorous publications, police journals, cheap story papers, papers like the *Youth's Companion*, the *Outlook*, and countless trade and technical journals. The quality of the literature published in them is probably on the whole not much, if any, superior to that found in the dailies. Weekly publications of what we commonly call the better class would bring up the aver-

age, reducing the crime and gossip ratios; cheap story papers and publications of that kind would tend to raise those ratios. The level in general is probably about that of the daily publications.

The number of daily, weekly and monthly copies of periodicals published in the United States every year is: dailies, 2,865,466,000; weeklies, 1,208,190,000; monthlies, 263,452,000; total, 4,337,108,000 copies.

SPACE DEVOTED TO VARIOUS SUBJECTS.

	Per Cent. of Space (Approx.)	Space in Terms of a Book the Size of "David Harum" Copies.
1. Commercial and financial: including market and manufacturing reports, real estate, etc.	14	270,600,000
2. Health and pleasure resorts; general gossip; trivial town news	8	160,200,000
3. Advertisements: dry goods, clothing, department stores, etc	8	159,200,000
4. Political: domestic, army and navy, Congress, Philippine War, etc	8	156,600,000
5. Sports: athletics, etc	7	132,000,000
6. Legal: trials, colonial questions, notices, etc	6	119,000,000
7. Criminal	4	86,200,000
8. Personal: not trivial	3½	71,400,000
9. Advertisements: personal, marriages, deaths, employment wanted	3½	69,600,000
10. Advertisements: medical	3	61,200,000
11. Advertisements: railroads, shipping, telephone, telegraph, hotels, etc	3	60,000,000
12. Advertisements: wants	3	58,000,000
13. Advertisements: real estate, lodgings, resorts	3	56,400,000
14. Literature: essays, stories, poetry, book reviews, drawing, music and art	2½	51,000,000
15. Social Science: strikes, unions, reform work, etc	2½	49,400,000
16. Advertisements: financial, stocks, etc	2½	49,400,000
17. Religion: churches and church work	2½	47,600,000
18. Political: foreign, including wars	2⅜	46,400,000
19. Railroads; shipping news; trolley lines, etc	2¼	45,000,000
20. Disasters	2	41,000,000
21. "Society"	2	41,000,000
22. Science	2	40,000,000
23. Political: international, Chinese crisis, Nicaragua Canal, etc	1½	30,200,000
24. Advertisements: theatre, opera and other entertainments	1	21,200,000
25. Educational: schools, colleges	1	18,800,000
26. Advertisements: food and mineral waters	¾	15,000,000
27. Theatrical: actual stage news	⅔	13,400,000
28. Musical	⅔	12,600,000
29. Advertisements: books	½	9,000,000
30. Advertisements: fine arts, schools, etc	¼	3,400,000
31. Historical	1·5	3,600,000
32. Advertisements: liquors	1·6	3,200,000

Note—Twenty-eight per cent. or 566,000,000 volumes is advertising.

SUMMARY OF OUTPUT OF PERIODICALS

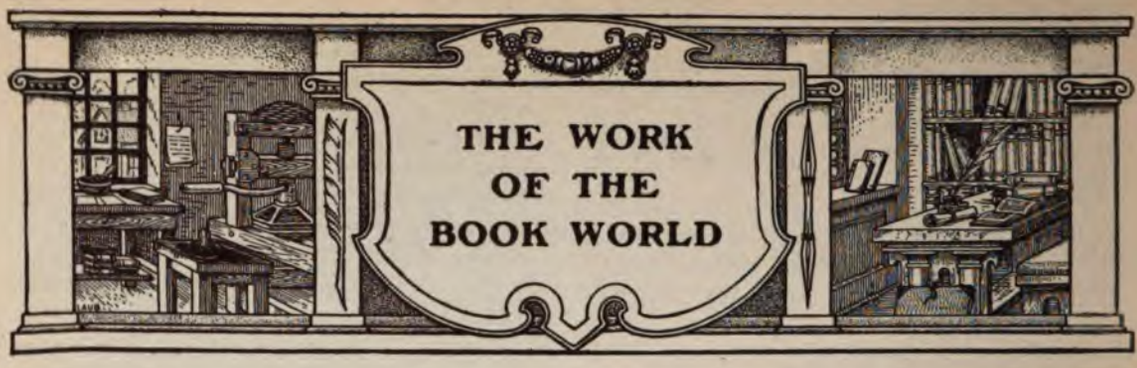
	Copies of "David Harum."
1. Political and governmental matters	352,200,000
2. Criminal, sensational and trivial	287,400,000
3. Intellectual, scientific and religious	248,200,000
4. Personal and social	572,800,000
5. Business	539,400,000
Total	2,000,000,000

Monthlies number a total output in a year of 285,000,000. The number of readers of each copy is probably greater than the number of readers of each copy of the weeklies and the dailies, but, after all, in the great mass of printed matter published, monthly and quarterly journals may almost be left out of account. Above are tables showing the amount and kind of reading done.

This is the newspaper age. It is not true, of course, that any single person reads everything in any newspaper, but each of the diversified items in every edition both in the news and views the people wish to read and in the announcements the advertisers wish them to read, is scanned by some one, and the total effect of all the reading must certainly be tremendous.

The scope of the influence of various kinds of periodical publications is shown in the following table, which shows the extent to which the various kinds of journals are read. The papers are classified according to circulation:

Daily Circulation	Dailies	Weeklies	Monthlies
Over 75,000	1,635,425,000	85,800,000	172,800,000
" 40,000	350,560,000	70,720,000	22,080,000
" 20,000	350,560,000	111,280,000	22,080,000
" 17,500	109,550,000	38,220,000	8,220,000
" 12,500	156,400,000	53,300,000	10,500,000
" 7,500	14,085,000	68,250,000	12,150,000
" 4,000	179,036,000	76,900,000	10,800,000
" 2,000	40,690,000	312,600,000	4,800,000
All under 2,000 rated at 600	29,160,000	391,120,000	22,000
	2,865,466,000	1,208,190,000	263,452,000



STORY-TELLERS vs. NOVELISTS

By Frank Norris

IT is a thing accepted and indisputable that a story-teller is a novelist, but it has often occurred to one that the reverse is not always true and that the novelist is not of necessity a story-teller. The distinction is perhaps a delicate one, but for all that it seems to be decisive, and it is quite possible that with the distinction in mind a different judgment might be passed upon a very large part of present-day fiction. It would even be entertaining to apply the classification to the products of the standard authors.

The story-telling instinct seems to be a gift, whereas—we trend to the heretical—the art of composing novels—using the word in apposition to stories, long or short—may be an acquirement. The one is an endowment, the other an accomplishment. Accordingly throughout the following paragraphs the expression: novelists of composition, for the time being, will be used technically, and will be applied to those fiction-writers who have not the story-telling faculty.

It would not be fair to attempt a proof that the one is better or worse than the other. The difference is surely of kind and not of degree. One will only seek to establish the fact that certain eminent and brilliant novel-writers are quite bereft of a sense of fiction, that some of them have succeeded in spite of this deficiency, and that other novel-writers possessing this sense of fiction have succeeded *because* of it, and in spite of many drawbacks such as lack of training and of education.

It is a proposition which one believes to be capable of demonstration that every child contains in himself the elements of every known profession, every occupation, every art, every industry. In the five-year-old you may see glimpses of the soldier, trader, farmer, painter, musician, builder and so on to the end of the roster. Later, circumstances produce the atrophy of all of these instincts but one, and from that one specialized comes the career. Thus every healthy-minded child—no matter if he develops in later years to be financier or boot-maker—is a story-teller. As soon as he begins to talk he tells stories. Witness the holocausts and carnage of the leaden platoons of the nursery table, the cataclysms of the Grand Trans-Continental Play-room and Front-Hall Railroad system. This, though, is not real story-telling. The toys practically tell the story for him and are no stimulant to the imagination. However, the child goes beyond the toys. He dramatizes every object of his surroundings. The books of the library shelves are files of soldiers, the rugs are islets in the seaway of the floor, the easy-chair is a comfortable old gentleman holding out his arms, the sofa a pirate brig or a Baldwin locomotive, and the child creates of his surroundings an entire and complex work of fiction of which he is at one and the same time hero, author and public.

Within the heart of every mature human being, not a writer of fiction, there is the withered remains of a little story-teller who died very young. And the love of good fiction and the appreciation of a fine novel in the man of the world of riper years is—I like to think—a sort of memorial tribute which he pays to his little dead playmate of so very long ago, who died very quietly with his little broken tin locomotive in his hands on the cruel day when he woke to the realization that it had outlived its usefulness and its charm.

Even in the heart of some accepted and successful fiction-writer you shall find this little dead story-teller. These are the novelists of composition, whose sense of fiction, under stress of circumstances, has become so blunted

that when come at last to full maturity and to the power of using the faculty, they can no longer command it. These are novelists rather of intellect than of spontaneous improvization; and all the force of their splendid minds, every faculty other than the lost fiction-faculty, must be brought into play to compensate for the lack. Some more than compensate for it, so prodigal in resource, so persistent in effort, so powerful in energy and in fertility of invention, that—as it were by main strength—they triumph over the other writer, the natural story-teller, from whose pen the book flows with almost no effort at all.

Of this sort—the novelists of intellect, in whom the born story-teller is extinct, the novelists of composition in a word—the great example, it would seem, is George Eliot. It was by taking thought that the author of "Romola" added to her stature. The result is superb, but achieved at what infinite pains, with what colossal labor—of head rather than of the heart! She did not *feel*, she *knew*, and to attain that knowledge, what effort had to be expended! Even all her art cannot exclude from her pages evidences of the labor, of the superhuman toil. And it was labor and toil for what? To get back, through years of sophistication, of solemn education, of worldly wisdom, back again to the point of view of the little lost child of the doll-house days.

But sometimes the little story-teller does not die, but lives on and grows with the man, increasing in favor with God, till at last he dominates the man himself and the play-room of the old days simply widens its walls till it includes the street outside, and the street beyond and other streets, the whole city, the whole world and the story-teller discovers a set of new toys to play with, and new objects of a measureless environment to dramatize about, and in exactly, *exactly* the same spirit in which he trundled his tin train through the halls and shouted boarding orders from the sofa he moves now through the world's play-room "making up stories"; only that now his heroes and his public are outside himself and he alone may play the author.

For him there is but little effort required. He has a *sense of fiction*. Every instant of his day he is dramatizing. The cable-car has for him a distinct personality. Every window in the residence quarters is an eye to the soul of the house behind. The very lamp-post on the corner, burning on through the night and through the storm, is a soldier, dutiful, vigilant in stress. A ship is Adventure. An engine a living brute; and the easy-chair of his library is still the same comfortable and kindly old gentleman holding out his arms.

The men and women of his world are not apt to be—to him—so important in themselves as in relation to the whirl of things in which he chooses to involve them. They cause events, or else events happen to them, and by an unreasoned instinct the story-teller preserves the consistencies (just as the child would not have run the lines of the hall railway across the sea-way of the floor between the rugs). Much thought is not necessary to him. Production is facile, a constant pleasure. The story runs from his pen almost of itself, it takes this shape or that, he knows not why, his people do this or that and by some blessed system of guess-work they are somehow always plausible and true-to-life. His work is haphazard, yet in the end and in the main tremendously probable. Devil-may-care, slipshod, melodramatic, but invincibly persuasive he uses his heart, his senses, his emotions, every faculty but that of the intellect. He does not *know*, he *feels*.

Dumas was this, and "The Three Musketeers," different from "Romola" in kind but not in degree, is just as superb as Eliot at her best. Only the Frenchman had a sense of fiction which the Englishwoman had not. Her novels are character studies, are portraits, are portrayals of emotions, or pictures of certain times and certain events, are everything you choose but they are not stories and no stretch of the imagination, no liberalness of criticism can make them such. She succeeded by dint of effort where the Frenchman—merely wrote.

George Eliot compensated for the defect artificially and succeeded eminently and conclusively, but there are not found wanting cases—in modern literature—where "novelists of composition" have *not* compensated beyond a very justifiable doubt, and where had they but rejoiced in a very small modicum of this dowry of the gods their work would have been—to one's notion—infinitely improved.

As for instance Tolstoi; incontestably great though he be, all his unquestioned power has never yet won for him that same vivid sense of fiction enjoyed by so (comparatively) un-

important a writer as the author of "Sherlock Holmes." And of the two, judged strictly upon their merits as *story-tellers*, one claims for Mr. Doyle the securer if not the higher place, despite the magnificent genius of the novelist.

In the austere Russian—gloomy, sad, acquainted with grief—the child died irrevocably long, long ago; and no power however vast, no wisdom however profound, no effort however earnest, can turn one wheel on the little locomotive of battered tin or send it one inch along the old right of way between the nursery and the front-room. One cannot but feel that the great author of "Anna Karenina" realizes as much as his readers the limitations that the loss of this untainted childishness imposes. The power was all his, the wonderful intellectual grip, but not the fiction spirit—the child's knack and love of "making up stories." Given *that*, plus the force already his own, and what a book would have been there! The perfect novel! No doubt, clearer than all others, the great Russian sees the partial failure of his work, and no doubt keener and deeper than all others sees that unless the child-vision and the child-pleasure be present to guide and to stimulate, the entrances of the kingdom must stay forever shut to those who would enter, storm they the gates never so mightily and beat they never so clamorously at the doors.

Whatever the end of fiction may be, whatever the reward and recompense bestowed, whatever object is gained by good work, the end will not be gained, nor the reward won, nor the object attained by force alone—by strength of will or of mind. Without the auxiliary of the little playmate of the old days the great doors that stand at the end of the road will stay forever shut. Look once, however, with the child's eyes, or for once touch the mighty valves with the child's hand and Heaven itself lies open with all its manifold wonders.

So that in the end, after all trial has been made and every expedient tested, the simplest way is the best and the humblest means the surest. A little child stands in the midst of the wise men and the learned, and their wisdom and their learning are set aside and they are taught that unless they become as one of these they shall in nowise enter into the Kingdom of Heaven.

THE LETTERS AN AUTHOR RECEIVES

By a Popular Novelist

OF the many letters an author receives from strangers, about three in ten, if I may judge by my experience, are from autograph hunters. Those from whom I hear are always "great admirers" of my work and much given to hope that I may find time to send a sentiment with the autograph. Many address one with a hereditary confidence: "My collection," they say, "is one of the largest in the country, having been started by my great-grandmother, and it includes autographs of every President of the United States." Most are ladies; many mere children—like the boy who wrote: "I am a boy and will be twelve years old December 21st. I have just finished reading ——— and enjoyed it very much. I felt so sorry when old Tom died. I loved that dog and will you please send me your autograph."

Many send my own books from distant places with a flattering request for an autographic inscription, forwarding stamped wrappers with the books, and later handsomely acknowledging the courtesy with some gift—usually a rare book but occasionally a piece of china for my wife. Letters come from secretaries of literary societies in remote and unheard of places notifying me of my election to honorary membership; or I am informed that the old brick meeting-house I knew as a boy is in financial trouble, or that the Ladies' Society of a certain church is to give a fair and would like a few autograph copies of my latest novel for the literary counter. People inform me that they knew a certain character in one of my books and go into much detail in which I am supposed to be interested. Others recite curious facts or episodes in their own experience as, for example, one good lady who told me how a crow had stolen "a wedding dress." Less altruistic correspondents ask me to read and to criticize articles, tales, or poems; young men wish to know what course of reading would best prepare them for a literary career; enterprising publishers of cyclopædias offer me added fame at so much a line; promoters suggest opportunities for investment which I do not care to accept. Half-forgotten friends revive memories of my boyhood—old pledges of friendship gone the way of all dreams, but sweet to remember.

But the letters I prize are those that come

from the fulness of the writer's heart, and these are the ones I read over with an added sense of responsibility. One came this very morning, asking what became of the pretty hazel-eyed maiden mentioned in the early part of one of my books and never after. Alas! one cannot tell: what became of "Sweet Alice" in the song?

Another touched me deeply; I transcribe it here substantially as it came. I have had many like it, but few so well expressed.

"DEAR SIR: In apology for daring to presume upon your patience I will say that I come near being reckoned in this small community as a 'shut in,' and my friends bring me books. After reading them I sometimes amuse myself by writing imaginary letters to the authors, telling them what I wish they had put in or left out. Never before have I been so bold as to put the thoughts on paper; so as no letter was ever mailed, in all probability this will never be.

"The top book on the chair by my bed is———. I have thanked my friend profusely for giving it to me, but that does not satisfy my soul. I want to thank you for writing it and to tell you that it gave me more pleasure than any book which I have read in years. A sweet, pure, interesting, living, breathing story without a villain, or plots or counterplots to harrow your soul and make you sorry. It tells a story of simple human nature and faithfulness. Unfaithfulness has too prominent a part in the writings of today. By giving it a back seat, an obscure position in the papers, on the stage and in books, the world would soon begin to see how much real faithfulness there really is. I lie here and hear the trains go by at night—the traffic of the world going on while those who buy and sell and travel sleep. It takes an immense amount of faithfulness to accomplish this!

"The electric light burns in my room; somebody is faithful that I may lie here and read. I wake in the wee small hours to see the doctor's kindly, earnest face bending over me and to hear his steps go down the hall to patients more seriously ill. What faithfulness!

"Next to a parent's there is no faithfulness like a doctor's and I love to see it presented to the people.

"Your book is beautiful and may you live to write many more on the same high plane!

"But—there is one little sorrow in the book for me: ——— isn't a real person. If he were I could get a good deal of consolation thinking that when old Charon rowed over in his little skiff after me and when we neared the other shore I might catch sight of ——— somewhere on the bank and I know he would say to me, 'Don't be afraid, little girl; nothin' goin' t' harm you here.'"

There are other letters I keep and prize—letters that speak to me with peculiar pathos of what I have done, or what I am trying to do. It is a great multitude—those who buy novels here in America. I am told that I have at least two million readers but I wonder if that is possible? Well, anyhow, these many letters make one feel as if one were talking into the heart of humanity, and seem to bring back its answer. They convince me that every noble ideal creates its counterpart in real life as surely as it has the power to inspire admiration.

A SHORT GUIDE TO NEW BOOKS

BIOGRAPHY AND AUTOBIOGRAPHY

Mr. SLASON THOMPSON'S "Eugene Field" (Scribner. $3 net), is more a collection of reminiscences than a conventional biography. From these reminiscences Field stands out with distinctness. The anecdotal and intimately personal character of the volumes fill it with quaint interest, and the reproductions of Field's pen-sketches and unpublished verses add personal flavor to the text. Naturally such a book as the two luxurious volumes of "The Confessions of a Caricaturist" (Harper. $10 net), by Mr. HARRY FURNISS, have an even more intimate interest as the first-hand observations of a man whose position as caricaturist for *Punch* brought him into close relation with the English public men of the last quarter-century. Mr. Furniss's revelations of the idiosyncrasies of Lewis Carroll, his clever sketches and pointed stories of Disraeli, Gladstone, Lord Randolph Churchill and Charles Stewart Parnell, not only have the charm of gossip, but cast light from an odd point of view on some very important men. It might be expected that "V. R. I. Queen Victoria: Her Life and Empire," by the MARQUIS OF LORNE (Funk and Wagnalls. $2.50), would make similar disclosures, and it does—but

Eugene Field

The Confessions Of a Caricaturist

V. R. I. Queen Victoria

meagrely. In the main the book is simply an entertaining chronicle of the upbringing of the Queen, her accession, Prince Albert's courtship, the wedding, the Queen's family relationships, and the habits and friendships of her later life. Throughout, the Queen is regarded reverently as a personage whose individuality is just a little more than mortal. Quite different from all these personal sketches is "Lamarck: His Life and Work" (Longmans. $2.40 net), by Professor A. S. PACKARD of Brown University. The importance of the neo-Lamarckian school in modern evolutionary thought makes a study of Lamarck both valuable and timely, and Professor Packard has gleaned faithfully to gather material heretofore not accessible; but his volume is rather a book in the making than a book made. The information is there, but it is not systematized. The book gives a clear idea of the life of Lamarck and a comprehensive statement of his work, chiefly in Lamarck's own words; but the expository method is inept. Mrs. MARY S. AUSTIN'S "Philip Freneau" (Wessels. $2.50 net), has much the same flaw. It is a scholarly production lacking in literary finish. The account of Freneau is careful and historically accurate, but the picturesque figure of this early American poet who was also sea-captain, fighter, pioneer, journalist and slanderer does not stand out as strikingly as it might. A really brilliant piece of biographical work, however, is Mr. HILAIRE BELLOC'S "Robespierre" (Scribner. $2 net), a study, half psychological, half historical, of an original and solitary man whose mind fed inwardly upon itself as it viewed the portentous events it was guiding. The book is highly wrought and dramatic; often imaginative and always exact.

Lamarck: His Life And Work

Philip Freneau

Robespierre

EXPLORATION

So full of Oriental fascination are Sir RICHARD F. BURTON'S accounts of daring exploration that his posthumous "Wanderings in Three Continents" (Dodd, Mead. $3.50), collected papers read before societies, have all the charm of his more voluminous works, though they add but little to what we know of his adventures. The mysterious, dark Englishman who penetrated to the holy places of Medinah and Mecca in disguise, who reached Lake Tanganyika as early as 1858, who spent his remarkable life exploring, tells simply and directly what he did and saw; and his narratives have the interest of strangeness and reality combined. The late Captain M. S. WELLBY relates in "'Twixt Sirdar and Menelik" (Harper. $2.50), the story of a trip in 1898 through a part of East Africa traversed by Burton forty years before, though Burton stopped at Harar and Captain Wellby went on to the Nile. His account is written in the straightforward style of a man of action. According to report the East African tribes are extremely savage, as they certainly were when Burton met them, but Captain Wellby by treating the natives with justice and friendliness came through unharmed. The book very readably tells how he did it. Of the two other books of exploration at hand Professor J. C. VAN DYKE'S "The Desert" (Scribner. $1.25 net), is rather the work of a literary man than of an explorer. Living for a time in the great deserts of arid America, Dr. Van Dyke kept a curious watch on the shapes and colors, the plants and birds and animals that the desert presents; and his book—an appreciation, it might be called—shows the manifold wonders that his observation revealed. It is somewhat unrestrained, but suggestive. In a similarly impressive country, the Grand Canyon of the Colorado, Mr. GEORGE WHARTON JAMES spent so many years that his comprehensive treatment of the region called "In and Around the Grand Canyon" (Little, Brown. $3), has the merit not only of enthusiastic appreciation but of scientific and historical accuracy. There is very little about the stupendous Canyon country that Mr. James has failed to cover. The volume is history, exciting adventure, and an excellent guide-book; and the photographs are decidedly successful.

Wanderings In Three Continents

'Twixt Sirdar and Menelik

The Desert

In and Around the Grand Canyon

FICTION

Three or four among the recent novels may be regarded as efforts at sincere and serious bits of literary work. Others are mere sedative tales, and one or two long stories—in no sense novels—frankly take for granted the reader's acquiescence in an entertainment of absurdity.

Perhaps the best workmanship is shown by Mr. HENRY B. FULLER in two novelettes and a short story in "Under the Skylights" (Appleton. $1.50), a brilliant, well-written satire on various phases of Chicago life, more especially among artistic and pseudo-artistic people. The easily recognizable Western author in "The Downfall of Abner Joyce," is sketched with bold vigor and convincingness, and in "Little Grady and the Grindstone," the incidents of a good story take place against a Chicago background done with skill. The bookmaking, too, deserves a word of praise. A spirited story of men and cattle in the hills of West Virginia makes "Dwellers in the Hills," by MELVILLE DAVIDSON POST (Putnam. $1.25), different in every sense from "Under the Skylights." It is a vigorous outdoor book with a refreshing atmosphere and a bracing philosophy, the tale of a cattle-deal in which schemers are outwitted by a daring and des-

Under the Skylights

Dwellers in the Hills

perate rival. There are real men, real horses and real cattle—a strenuous story. An unpractised hand wrote "The Second Generation" (Macmillan. $1.50), another Chicago story, by JAMES WEBER LINN. The young hero, a reporter, falls in love with the daughter of a politician, whom the reporter vigorously harries for a wrong once done his father. Though a 'prentice attempt, the story is worth telling and worth reading, because it promises something better; and it presents some sides of newspaper life with a certain freshness. "Margaret Warrener," by Miss ALICE BROWN (Houghton, Mifflin. $1.50), takes the reader to the East with a serious study of delightful Boston people who say very bright things. Margaret Warrener gets comfort out of self-sacrifice. She loves a husband who has fallen in love with Laura, a new and interesting character in fiction with a fine intellect, a "large masculine gift of fellowship" and no notion whatever of self-immolation; and the situation is skilfully worked out. At first equally clever, Mr. ROBERT HERRICK's latest novel, "The Real World," (Macmillan. $1.50), slows down toward the end and grows vague. It starts well and moves with rapid, graceful action until the hero has finished his course at Harvard, but when the young man goes West and enters a railroad fight, he fails, in the story, to keep clearly defined. The action, too, shifts jerkily from place to place. And yet so powerfully has Mr. Herrick developed the early part of the narrative, that the book, with all its indefiniteness, falls little short of the best novels that Americans have recently written. From such work it is a drop to "Lauriel: The Love Letters of an American Girl," edited by A. H. (L. C. Page. $1.50), but Lauriel is such a really "nice girl" that her letters to the Western engineer whom she learns to know better and better are pleasant to read, though they are far from literature.

The Second Generation

Margaret Warrener

The Real World

Lauriel

Turning to the romances one finds in "The Strength of the Weak," by Mr. CHAUNCEY HOTCHKISS (Appleton. $1.50), a tale with a strong, steady swing of narrative power that makes the story one of the best of recent historical novels. An English youth who holds a seignory in Canada at the outbreak of the French and Indian Wars rescues the heroine from the Indians, and after exciting adventures marries her. The book is dramatic and memorable. Another thoroughly absorbing story is "Forest Folk," by JAMES PRIOR (Dodd, Mead. $1.50), in which two fascinating loves develop in a lawless region of Nottinghamshire, where daylight fox-hunting and midnight machine-breaking kept accidents common a hundred years ago. Tant Rideout is a whimsical John Ridd, doomed to lose his Lorna Doone; and Nell, his sister, is a rustic, fox-hunting, cool-eyed beauty who finally marries the man who saves her from being drowned as a witch. The book has passion, incident, life.

The Strength of the Weak

Forest Folk

OTHER FICTION

Few English writers can mingle tragedy and humor with more art than "Zack," and in "Dunstable Weir" (Scribner. $1.50) Miss KEATS makes her stories of Devonshire life a refreshing literary luxury. Mr. QUILLER-COUCH, on the other hand, in the "Laird's Luck" (Scribner. $1.50; a beautiful piece of bookmaking), though he does not fail to entertain, scarcely rises above the commonplace. Four American volumes of short stories, terser and more interesting than Mr. Quiller-Couch's tales, recount dramatic episodes in three kinds of the strenuous life. Mr. FRANK H. SPEARMAN'S railroad stories, "Held for Orders" (McClure, Phillips. $1.50), do not, it is said, appeal convincingly to railroad men, but to the layman they seem vigorous, vivid transcripts of experience, with an air of photographic reality—not art perhaps, but good entertainment. Mr. MORGAN ROBERTSON, the chronicler of sea life in which the actions of strong men under stress of excitement are more important than the "splicing of the jib" and the "hoisting of the sheet," has collected in "Shipmates" (Appleton. $1.50) some salt-water stories of the things men do outside the restraints of civilization. "A Day of a Dog," particularly, is a good tonic for jaded minds. Mr. EDWIN LEFEVRE in "Wall Street Stories" (McClure, Phillips. $1.50) exploits the intricacies of "street" business with more or less success, writing in an interesting, journalistic fashion. Mr. WILLIAM ALLEN WHITE'S stories, "Stratagems and Spoils" (Scribner. $1.50), sketch phases of American political life the country over. They are well written, with a journalist's eye for actuality, and are occasionally lightened with a touch of real art. "Blue Grass and Rhododendron" by JOHN FOX, JR. (Scribner. $2), is a collection of sketches filled with the fragrance and beauty of the fields of Southern Kentucky and Northern Tennessee, breathing the healthy delight of the great outdoors, as Mr. HENRY VAN DYKE'S "The Ruling Passion" (Scribner. $1.50), thrills with the sincere passion of frontier French-Canadian life, in which real people move before a background of living nature. Miss CAROLINE DUER in "Unconscious Comedians" (Dodd, Mead. $1.50), brings us back to the glittering social world. Original in plot and full of humorous situations the stories depict with a light, sure touch, certain phases of

Short Stories

"smart" American life. Two English writers of sea stories and one American have collected entertaining tales. Mr. W. W. JACOBS, who is sort of a sea-Dickens, has filled "Light Freights" (Dodd, Mead. $1.50), with more of his inimitably humorous yarns, and Mr. CUTCLIFFE HYNE in "The Derelict," (Lewis, Scribner. $1.50), tells with the story-teller's charm a handful of stories journalistically vivid. Mr. THOMAS A. JANVIER'S long short stories, "Upon Great Waters" (Harper. $ 1.50), are weird, unreal and melodramatic, yet they have the swing of the sea and are occasionally interesting and well written.

STUDIES IN LITERATURE

Mr. W. P. TRENT and Mr. B. W. WELLS have very capably compiled three handsome little volumes (Crowell. $2.25 a set), that show in brief selections the development of American literature from 1607, the date of the "transplanting of culture," to 1775. The book is of value not so much to students of literature as to readers who would learn about the life and spirit of the colonists. The few selections from the fascinating diary of Samuel Sewall, would make the book worth preservation, and it is filled with other selections almost equally good; an eminently commendable publication. If the reader who has gained an insight into colonial literature from these little volumes, however, turns for a knowledge of Shakespeare to "What is Shakespeare" (Macmillan. $1.50), by Professor L. A. SHERMAN, of the University of Nebraska, he is as likely to be befogged as enlightened. The book devotes itself to a close and somewhat teasing method of interpreting a few of the greater plays, and though it ought to be of value to students who are making a first acquaintance with Shakespeare, it really adds little or nothing to our conception of the great dramatist, to our knowledge about him, or to his glory as an artist. In Mr. W. S. BROWNELL'S book, on the other hand, "Victorian Prose Masters" (Scribner. $1.50), though it is much like many another book about books, there are so many sane and well-judged opinions excellently put, that the total effect of reading it is stimulating and pleasant. Together with the criticisms are glimpses of interesting personalities—of George Eliot, Thackeray, Dickens and the other giants of the last generation. The Thackeray and Meredith essays are particularly good.

Colonial Prose and Poetry

What Is Shakespeare

Victorian Prose Masters

POETRY AND VERSE

Admirably edited by Professor GEORGE E. WOODBERRY, the Cambridge Shelley (Houghton, Mifflin. $2.), maintains the high standard of a series invaluable to students of the English poets. A new popular edition of Mr. F. L. KNOWLES' excellent "Golden Treasury of American Songs and Lyrics" (L. C. Page. $1.), makes widely accessible a collection of the best American verse, significant as showing very clearly the præëminence of Poe. Of new verse Mr. W. C. HENLEY'S rings truest. In his "Hawthorn and Lavender" (Harper. $1.60 net), he strikes a note of virile passion. Music is at times lacking, but there is a constant vibration of the *vox humana* of reality. Pathos runs through the volume. Delicate, if less powerful, is Mr. GEORGE SANTAYANA'S "Hermit of Carmel" (Scribner. $1.25 net). Tempered beauty distinguishes it. All of Mr. Santayana's work has æsthetic felicity. "The Masques of Cupid" (Scribner. $3.50) by EVANGELINE WILBOUR BLASHFIELD, illustrated by Edwin Harland Blashfield, is diverting verse in a beautiful volume. The love comedies are graceful and fanciful, but the charming illustrations and the excellent bookmaking account in great measure for the quality of the volume; it makes a very happy gift-book.

POCKET VOLUMES

Dainty little volumes are these; convenient to the hand, pleasing to the eye, and full of profitable matter well condensed. In the "Beacon Biographies" (Small, Maynard. $ .75 each), Dr. RICHARD BURTON writes sympathetically of Whittier, and Mr. FRANK B. SANBORN shows insight into the character of Emerson. Miss ALICE BACHE GOULD contributes a trustworthy life of Agassiz; and Professor GEORGE RICE CARPENTER writes of Longfellow as "the poet of the comparatively immature," and Mr. JAMES SCHOULER of Hamilton, as "the Cæsar of a hum-drum world." All are faithful biographies in little. The "Thumb-Nail Classics" (Century. $1.00 each), are types of what miniature books should be. Mr. RICHARD WATSON GILDER selected the extracts from Lincoln, and Mr. BENJAMIN C. SMITH those from various translations of Horace, for the two new volumes. The contents of the exquisite little books are brief but precious.

The Beacon Biographies

Thumb-Nail Classics

NATURE BOOKS

A pleasant outdoor book is the new illustrated edition of Mrs. ALICE MORSE EARLE'S "Old Time Gardens," which awakens all the old fragrance of remembered garden spots. The text contains much information about plants, graced with bits from authors and poets; and the pungent hedges and sweet-scented paths, the riotous tangles and stiff-bordered walks are so alluringly pictured that this is verily *The Lover of Gardens: Hys Booke.* Mr. W. I. LINCOLN ADAMS endeavors to give a similar charm to the

Old Time Gardens

farms and pastures of Northern New Hampshire in "Woodland and Meadow" (Baker & Taylor. $2.50 net), and though the text shows neither deep thought nor keen observation, the photographs that give the volume its excuse for existence are well executed and full of New England atmosphere. The hills and woods and farms are presented in the varying garb of the different seasons, and always with effectiveness. The volume is a series of suggestive photographs with a running commentary of description. "Studies of Trees in Winter," by Miss ANNIE OAKES HUNTINGTON (Knight, Millet. $2.25 net), is, on the contrary, a handbook. It describes with scientific precision the trees in New England as they appear in winter, in such fashion as to make them readily recognizable; and abundant photographs help identification. The volume is a good bit of workmanship.

Woodland and Meadow

Studies of Trees in Winter

ANNOUNCEMENTS

The following books, recently issued by Doubleday, Page & Company, are here noted without comment:

"The Writings of Col. William Byrd, 1674–1744"—edited by John Spencer Bassett ($10. net).

"The Colonials"—by Allen French, a story of the Great Lake region and of Boston at the beginning of the Revolution ($1.50).

"The Leopard's Spots"—by Thomas Dixon, Jr. A tale of the South since the War, treating the Negro question from the white man's point of view ($1.50).

"Captain Jinks of the Horse Marines"—by Clyde Fitch. A comedy ($1.25 net).

"The Battleground"—by Ellen Glasgow. A story of Virginia life in war-time, by the author of "The Voice of the People" ($1.50).

THE MONTH'S MOST POPULAR BOOKS

REPORTS from booksellers in Pittsburg, Cincinnati, Bridgeport, New York, Toronto, Rochester, St. Louis, Dallas, Cleveland, Kansas City, Boston and Detroit, and from librarians in Hartford, Jersey City, Springfield, Buffalo, Minneapolis, Cincinnati, Detroit, Chicago, New York and Cleveland combine into the following lists showing demands for books for the month ending February 1st:

BOOK-DEALERS' REPORTS

1. The Right of Way—Parker. (Harper.)
2. The Man from Glengarry—Connor. (Revell.)
3. Lazarre—Catherwood. (Bowen-Merrill.)
4. The Cavalier—Cable. (Scribner.)
5. Marietta—Crawford. (Macmillan.)
6. The Crisis—Churchill. (Macmillan.)
7. Kim—Kipling. (Doubleday, Page.)
8. The History of Sir Richard Calmady — Malet. (Dodd, Mead.)
9. Count Hannibal—Weyman. (Longmans.)
10. D'ri and I—Bacheller. (Lothrop.)
11. In the Fog—Davis. (Russell.)
12. Lives of the Hunted—Seton-Thompson. (Scribner.)
13. Blennerhassett—Pidgin. (Clark.)
14. The Ruling Passion—Van Dyke. (Scribner.)
15. Graustark—McCutcheon. (Stone.)
16. The Portion of Labor—Wilkins. (Harper.)
17. The Eternal City—Caine. (Appleton.)
18. The Benefactress—Anon. (Macmillan.)
19. If I Were King—McCarthy. (Russell.)
20. Cardigan—Chambers. (Harper.)
21. Circumstance—Mitchell. (Century.)
22. The Making of an American—Riis. (Macmillan.)
23. Tarry Thou Till I Come—Croly. (Funk & Wagnalls.)
24. The Velvet Glove—Merriman. (Dodd, Mead.)
25. One of My Sons—Green. (Putnam.)
26. The Pines of Lory—Mitchell. (Life Pub. Co.)
27. The Garden of a Commuter's Wife—Anon. (Macmillan.)
28. Stratagems and Spoils—White. (Scribner.)
29. Trees in Winter—Huntington. (Knight & Millet.)
30. God Wills It—Davis. (Macmillan.)

LIBRARIANS' REPORTS

1. The Right of Way—Parker. (Harper.)
2. The Crisis—Churchill. (Macmillan.)
3. Lazarre—Catherwood. (Bowen-Merrill.)
4. D'ri and I—Bacheller. (Lothrop.)
5. The Eternal City—Caine. (Appleton.)
6. The Man from Glengarry—Connor. (Revell.)
7. Blennerhassett—Pidgin. (Clark.)
8. Up from Slavery—Washington. (Doubleday, Page.)
9. Cardigan—Chambers. (Harper.)
10. The Cavalier—Cable. (Scribner.)
11. Kim—Kipling. (Doubleday, Page.)
12. The Making of an American—Riis. (Macmillan.)
13. Lives of the Hunted—Seton-Thompson. (Scribner.)
14. Marietta—Crawford. (Macmillan.)
15. The History of Sir Richard Calmady—Malet. (Dodd, Mead.)
16. The Helmet of Navarre—Runkle. (Century.)
17. The Benefactress—Anon. (Macmillan.)
18. The Ruling Passion—Van Dyke. (Scribner.)
19. The Life of R. L. Stevenson—Balfour. (Scribner.)
20. Graustark—McCutcheon. (Stone.)
21. Alice of Old Vincennes—Thompson. (Bowen-Merrill.)
22. Life Everlasting—Fiske. (Houghton, Mifflin.)
23. Heroines of Fiction—Howells. (Harper.)
24. The Tory Lover—Jewett. (Houghton Mifflin.)
25. My Lady Peggy Goes to Town—Mathews. (Bowen-Merrill.)
26. The Riddle of the Universe—Haeckel. (Harper.)
27. The Puppet Crown—McGrath. (Bowen-Merrill.)
28. When Knighthood was in Flower—Major. (Bowen-Merrill.)
29. Janice Meredith—Ford. (Dodd, Mead.)
30. Tarry Thou Till I Come—Croly. (Funk & Wagnalls.)

HOW WE INCREASE FOREIGN EARNINGS

IF the growth of our exports is to mean the wresting of trade from competing nations as they fear abroad, it looks at first glance as if by bankrupting our customers we might stagnate for lack of an outlet for our goods. A recent English writer has declared that an increase in the number of our factories and our ships would destroy the merchant marine of England and devastate Lancashire, and, of course, if we impoverish England, England can no longer buy our products by the hundreds of millions of dollars' worth. So with Germany and Russia, France, Spain and the Netherlands. Nor can the industries of the Old World leave ruined factories behind and transport themselves overseas, as the manufacture of silk was transplanted from Southern France to New Jersey and the manufacture of thread from Scotland to Rhode Island. We cannot become the world's farm and the world's factory and the world's residence, too. But, we can become the world's industrial school.

Hardly a week goes by that a delegation from abroad does not come here for instruction. Now it is a party of railroad officials from England or France, or Australia; now a party of factory managers from Germany; now a group of workmen from Scotland; now an agricultural commission from Russia; again a band of students from Japan. Conversely, American makers of electrical apparatus or printing presses or sewing machines invest their capital in plants abroad to be run in American fashion by English, French or German workmen, or an American engineer establishes a locomotive works in Russia and teaches American methods to patient Slavs. In every such movement Europe takes one more lesson in the doctrine we are teaching. Each advance we make stirs Europe to greater wakefulness and accelerates European efforts. We are great industrially because we hurry, because we pay and earn high wages, because—workmen and capitalists—we ponder evenings and lie awake nights scheming to do to-morrow's work better than today's, because we make one machine do this week what six men did more slowly last week, and because we do things by wholesale, from the handling of baggage at railway stations to the subdividing of labor in a shoe factory. These things Europe has not done—but it is doing them. And in the altruistic task of teaching the Europeans we are selfishly conserving their capacity for earning and buying.

We are making them better customers in another way, subtly and indirectly, by raising their standard of living. While American lathes and drills, typewriters and printing presses, locomotives and electric cars, steam ploughs and automatic reapers, sewing machines and bicycles are saving time abroad and increasing wealth by increasing production, American wheat and corn and meat, canned fruits and vegetables, cotton, kerosene oil, ice chests, ice machines, coal and a thousand "handy American tricks" make household expenses lower and leave a wider margin for the luxuries that are spurs to material ambition. We are not merely unloading abroad products to be consumed; we are sending machines to make our customers produce more wealth of their own, feeding them cheaply while they do it, and bringing before them luxuries to key them up to greater and greater efforts to secure them. If we ship to South Africa a plough that one bullock can draw to replace a plough that required six, and to England steel ingots and plough-making machinery, we are adding to the potential wealth of the British Empire. As life here, where our labor-saving devices are manifold, becomes more and more automatic, life abroad becomes automatic; and as the standard of living rises here it rises there also. It is not a high protective tariff that Austria-Hungary needs so much as several hundred McCormick reapers and an equal number of American foremen. The world learns slowly enough our fundamental principle of economics—that wealth is produced by putting capital into the scrap heap, keeping the wage fund down and wages up, and dealing by wholesale; but after all in the stress of competition it is learning, and we need have no fear of glutting the world with our surplus product so long as we can teach the world how to earn enough to buy it. It should not be forgotten, moreover, that if

our exports have reached soaring figures our imports have followed. The richer we grow the more we import; with the very wealth secured by selling our products abroad we buy abroad. We cannot be said to be compelling the industrial ruin of our European neighbors if we not only increase their efficiency and raise their standard of living but also furnish them a market.

AMERICAN EXPANSION IN CHINA

By Albert J. Osgood

ONE meets here in China the representatives of all nations, each pushing for trade. The German, the Englishman, the American, the Frenchman, the Japanese, the Russian, the Austrian, the Dane and the Italian vie with one another. The passive Chinaman is awakening to the fact that he is being jostled by the restless foreigner, who is trying to introduce Western goods, and in spite of himself he is gradually learning the use (and abuse) of Western culture. It is at Shanghai, the great entrepôt of China, that the struggle is the fiercest. Conditions exist here of which the merchant at home has no knowledge. Among the difficulties are the customs, exchange, inadequate and cramped accommodations and very high rents, high expenses of living, poor transportation facilities and many other peculiarities of the Far East.

Rents are very high. Granted that a location is secured, the foreign dealer finds he has to pay ten per cent. on his rent per annum to the city for municipal taxes. He hangs out a small sign upon which are the characters he has chosen for a *hong* name. Chinese conservatism forbids a fixed sign over his door unless he is to conduct a retail business. Having established himself, he starts to call upon the Chinese merchants. His difficulties have now begun. The new arrival will be told, "We not ordering" or, "Order man just stepped out," or the time-worn "Will call at your office." It is only after most persistent and repeated effort that a foothold is gained.

One of the most difficult problems the newcomer has to deal with is the exchange, which is constantly fluctuating. He may have to reckon in English sterling, in francs, in yen, in Shanghai taels, in Haiquan taels, in Chefoo or Tien-tsin taels, in Mexican dollars, in rupees, or perchance in some other forms of currency. He learns that the representatives of the various banks meet three times every banking day to determine the values of the tael and of the Mexican dollar. He may be called upon to make a quotation in Mexican dollars, and the exchange may drop five or even ten per cent., and he finds himself involved in a heavy loss, particularly if it is a large transaction. Many a firm has started in Shanghai and closed its doors because of disaster brought about through a falling exchange. American merchants have not as yet learned to insist upon a direct transaction between the gold dollar and the tael. New York gold is first passed into English sterling, then into taels and then into the current money, Mexican dollars. At each transaction the bank makes its "squeeze." One never knows how much money one possesses. The bank "squeezes" at every point. For example, a man deposits $100 Mexican in the bank at 73.5; the bank will credit him with taels 73.3, taking two points for their commission. Let him remit this money in a draft to New York at the market rate of, say, 62⅞ and he will be credited with gold $46.15, the bank again taking a commission of two points. All accounts with the customs are paid in Haiquan taels, which involve yet another valuation. The tael is simply a money of account, as there is no real coin by that name. In Shanghai the tael has one value; the Tien-tsin tael is quite another matter; the Chefoo tael differs from any other, and, in short, nearly every port has a distinct tael of its own which differs from every other tael. The current coin is the dollar. Here, too, one meets with endless confusion, as Chinese dollars are coined in nearly every province, and while some pass at their face value, more are discounted. The Mexican dollar is generally accepted all over the Empire at its face value. There are numerous spurious coins. The Chinese are adept at the "sweating" system, and in some cases the dollar is sawn in two and a portion of the silver abstracted, the cavity being filled up with a baser metal, and the cleavage is so skilfully filled up as to defy even the expert. It is by the "ring" that spurious coins are detected. The Chinese *compradore*, or cashier, employed in every *hong*, often discovers a large amount of spurious coin, which he is willing to buy in from the foreigner at a discount and to pass on the market at the face value. The subsidiary coin is dependent upon the cash, which fluctuates in value. At present one can obtain but eight hundred and fifty for a dollar, while a few years ago it was worth eleven hundred cash. Here again one finds endless variety and room for argument, as there is the large Pekinese cash, the "beggar" cash and many other kinds.

Perhaps the most bitter competition an American has to meet comes from Germany. The Germans work early and late and frequently on Sunday. They are willing to accept small margins of profit and to take great risks. It is said that some of the leading houses began by offering to do business for the Chinese on one-half per cent. commission, which barely paid for

cable and postage charges. After getting the confidence of the dealers they raised their commission to two and a half per cent., although even now they sometimes work for less. The Chinese are and have been eager to import firearms, and the Germans are said to have ways of their own in supplying this demand. The American consul at Niuchuang happened to mention in a consular report that a certain kind of machinery might be employed to advantage, and named a leading firm of architects in Shanghai as being his informants. The firm in question were deluged with inquiries from Germany, while the manufacturers of other countries hardly took notice of the matter. German manufacturers make their goods according to the tastes and whims of the Chinese, and this is more than many of our American manufacturers are willing to do. "What is good enough for Americans," they seem to say, "must be good enough for our foreign trade, and if the Chinaman is so depraved as to want a lower standard then we are sorry for him, but we cannot change our standards." The result is that Germany is forging ahead and is obtaining a grip on the market which cannot be shaken, while American prestige is far from being what it ought to be.

One of the curious articles of commerce is the trade in old horseshoes and scrap metal, most of which comes from England. The Chinese find the quality of the metal in the horseshoes excellent for working up into plowshares, into agricultural implements and into many native forms of hardware. These shoes come mostly from London. They form excellent ballast for ships, and in this way are brought out at minimum cost for freight by the shipping companies.

One great obstacle which every foreign nation has to face is the danger of having a cheap substitute of a successful article made either by the Chinese themselves or by the Japanese. If by the Chinese there may be some hope of checking it, although the Chinese are usually able to evade detection. A couple of illustrations will suffice. Not long since a representative of a New York manufacturer of perfumed soap was walking through the native city of Shanghai when he saw in a shop window a box of what appeared to be his firm's soap. As the price asked was only about one-fourth of the usual selling price he purchased it, and found upon examination that it was a cheap imitation of his soap, and the spurious article had been made in Japan. The Japanese had copied not only the color of the soap and the method of packing, but had even stamped the name of the manufacturers and the trade-mark on it. Some years ago an American manufacturer introduced American stoves. One style seemed to take on the market, and as soon as a demand was created the Chinese began to manufacture the stove for themselves. They made a casting from an imported stove, and now there are numerous shops where stoves are being assembled and finished off upon which the name of the American manufacturer appears. The Chinese have not stopped with imitating the stove, but have taken the maker's name as well.

American condensed milk has taken hold in the Chinese market. The cans after having been used are carefully collected and resold. A cheap artificial milk, said to be composed chiefly of a paste made from rice flour, is placed in them, and the cans are resoldered and resold among the natives. Missionaries in Foochow have told the writer that they have seen this spurious milk exposed for sale there, and it has been found in Shanghai.

Perhaps the greatest disregard for trade rights is found among the Japanese. The writer has been told on good authority that a Japanese was recently in Shanghai for the purpose of selling labels upon which had been printed the trademarks for a number of well-known articles which have been patented in England and America. The Japanese met with a good sale, as the trademarks and labels were for the Chinese to use on spurious goods.

The future of China as a great consuming nation for the marts of the world is yet to be determined. Should China continue to manufacture foreign goods herself she may be able not only to supply her own wants, but may also flood the markets of the countries which now supply her. Within the past five years numerous factories have been started in Shanghai and other centres for the manufacture of cotton goods, silk, flour, paper, cigarettes and other commodities. Many of the enterprises have not as yet become paying, but it is difficult at present to predict the outcome of the movement or what it may lead to.

THE NEW CENTRE OF FINANCE

IT is likely that no building which is being planned for offices or for narrow city apartments presents the many structural difficulties that confronted the architects, builders and engineers of the new Stock Exchange in New York. First of all, the problem of a permanent foundation was troublesome, whether piles or caissons should be used, and whether or not they should excavate to bedrock. In the end it was decided to dig down to the rock bottom and build on pneumatic caissons. As a result there will be considerable storage room below ground, and sure and steady support for the building is assured. The many improvements on the Board Room floor necessary for doing an hour's business in a minute brought many puzzling questions.

The new floor is to be more than half again as large as that of the old Stock Exchange, the larger area being gained partly by the greater extent of ground covered, and partly by the arrangement of adjoining halls and rooms. Telegraph operators, messengers and others who helped to occupy the old floor will be moved to the basement and other floors. The five hundred telephones, which do the work of hundreds upon hundreds of boys and make the vast business of the Exchange possible, were not only at the New Street end of the floor, but were scattered all about the sides of the room. In the new building they will all be located at the New Street end, with a separate entrance for the operators, and with such an arrangement that space is remarkably economized. An elaborate pneumatic tube service is also planned. The method of getting sufficient light for the great floor of the Exchange, which was so dingy, is almost revolutionary. The two street walls of this floor of the building will be of plate glass instead of stone or brick. The shades, operated by electricity, will roll to the side instead of the top and radiators be placed at their base to warm their interior surfaces on cold days. The ventilation system, the centre of which will be in the cellar, will be exceedingly thorough, special pains having been taken with the Board Room. The big bulletin boards which will inform the floor brokers when they are called by telephone will be of opaque glass, and the numbers which notify the brokers will be lighted by electric lights and thus made visible to the entire floor. Different colored lights, moreover, will give added information as to the entrance at which the broker is needed. Under the Board Room floor is to be a new safe deposit vault. The building will be adequate in every point to meet the present demands of this little community which handles the millions of a world.

THE AUTOMATIC AGE IN TELEPHONY

THE main difference, after all, between modern life and the life of our grandfathers is that today communication is infinitely swifter than it was and momently accelerating. The developments in telephony are, perhaps, as steady and as startling as those the wireless system is making in telegraphy; electricity, compressed air and compound locomotives in traction; and the turbine steamer in cutting down time schedules on the ocean.

Adaptation to special needs, for example, is shown in the story of an American telephone man who journeyed to Cuba to discover why so many telephone receivers sent there by his firm succumbed within a month of installation. For when he had watched some half-dozen Cubans conducting heated discussions over the wire, accompanied with spirited Southern gestures and punctuated with thumps of the receiver on the wall, he invented a receiver fastened tightly to the wall and only moving up and down in a groove—a device that saved many breakages. But that is only an incident in the spread of an old system. Two recent installations, mark a distinct advance.

One is the introduction on the Illinois Central Railroad of train-despatching by telephone instead of by the time-honored telegraph—as yet an experiment with as great a chance to fail as to succeed, but certainly suggestive of possibilities. Even now, of course, a vast amount of railroad business is done by telephone. A freight agent, for instance, can sit at his office desk and explain the fine shades of necessary orders affecting fifty cars, in fifty places about a city, speaking with the tang in his voice that affects subordinates as face to face contact would, and modifying his demands at once to suit exigencies reported—and all this by telephone in one-tenth the time a succession of telegrams would demand. So with a thousand railroad activities. It looks, then, as if this swift personal communication—illustrated in another profession by the fact that an officer of the Calumet and Hecla mines can converse from Boston with foremen a mile underground in Michigan—might even be extended successfully to that most complicated of human activities, the despatching of trains. The recent New York Central accident could not have been prevented by any improvement in despatching, but many accidents have taken place of late through misunderstanding of orders—notably one on the Southern Pacific. If successful, this new installation means the elimination of an army of intelligent, skilled and well-paid workmen, with a consequent economy in railroad operation, and it also means safer railroading if messages can be sent as accurately as the telegraph now sends them and more speedily.

THE PASSING OF "CENTRAL"

A MORE significant innovation is a telephone system that does away with "Central." In practicable and successful operation in Fall River, Massachusetts, is a telephone exchange providing an automatic arrangement whereby the subscriber, by revolving a disk—somewhat like the disk of a combination safe—until it checks off the number he wishes to call for, "rings up" the number. Bringing the "combination" to the first number in the series he wishes causes a switch in the "Central" exchange to swing to a certain group of contacts; the next number narrows the selection to a certain number of contacts in the group; the last brings it to the identical spot required. The caller then pushes a button and the connection is established. If the line is busy,

a buzzing noise gives him warning. The calls come in first to the larger trunk lines, of course, and thus it might be expected that the apparatus would be often busy, since one call would shut off accessibility to many numbers in the group of instruments covered by the trunk line, but an ingenious contrivance causes the current to pass by the trunk lines that are busy till it comes to one not in use, so that the system would fail to work only when all the trunk lines of selectors were busy. Even then the buzzed warning would indicate that the caller would have to wait only until one of ten persons had finished talking.

For five months the Fall River system has operated successfully. Calls are made with greater rapidity than under the ordinary system. Since subscribers make their own connections there are no complaints of difficulties with "Central."

The "Central," instead of a busy, noisy room, lined with "hello-girls," is a bare, quiet place. Rows of automatic keyboards border it and one lone electrician listens to the alternating clicks of the big machine. He is merely a watchman, to see that nothing gets out of order. All through the day and night, week in and week out, the machine handles the talk of the town without human aid.

Many other towns beside Fall River are trying the new "Central" successfully. Among them are New Bedford, Albuquerque, N. M., Albert Lea, Minn., Ithaca, N. Y., and Skaguay, Alaska. Havana is going to test it and cables are being laid for the new system in Chicago.

The cost of maintaining the mechanical part of the system has not increased. And though it works hardship to discharged employees, the system economizes in wages, for, with the exception of necessary bookkeepers and a few attendants to see that things run on without hitches a force of work-people is not required. Indeed, on Sundays and during the night while the exchange is locked, the instruments continue making their connections without supervision. Privacy is secured. Cheapness is secured. The automatic telephone means another step in the elimination of middlemen and the automatizing of life.

GOVERNMENT OWNERSHIP IN BELGIUM

IN Belgium the telephone system is a good example of simplification by single ownership and control of all the instruments in the country. There the Government owns the entire system, which is divided into some seventeen sections so made up as to gain the best possible service, each with a main central. The subscriber can talk with any one in his section, and, by a monthly deposit in advance, with people in other sections. He is also allowed telephonic delivery of telegrams. By the single control and by the limited number of large central exchanges the telephony of the country is systematized, as it is impossible to regulate it in the United States where long distances add to the difficulties brought about by a large number of different companies.

The systems in Belgium are not equal in equipment to those in this country, but they are gradually being improved partly at least by the introduction of American ideas and inventions.

TO DECREASE ACCIDENTS

A STARTLING fact discovered by the Industrial Commission and published in their last report may give an impetus to the adoption in America of one of the best industrial institutions in Europe. The institution is the Amsterdam Museum of Security, which endeavors to keep up to date a collection of devices to prevent accidents among workingmen. A French association of employers, formed to further the use of safety appliances and safety methods, managed to cut down accidents in the factories under its supervision nearly fifty per cent., and eight years ago, accordingly, a museum was started in Holland looking to a similar end. There are no statistics at hand to show what the museum has accomplished, but next door, in Belgium, to take a single industry as a concrete example, one trainman was killed in 1898 to every 1,300 employed, and one injured to every 600; one passenger killed to every 10,000,000, and one injured to every 600,000; this, to set against the record for the same year in the United States—one trainman killed for every 450, and one injured for every 28; one passenger killed for every 2,300,000, and one injured for every 170,000. This enormous discrepancy is a strong argument in favor of our imitating the museum in Holland, for the startling fact brought out by the Industrial Commission is this: that although the proportion of certain kinds of railroad accidents has decreased since 1893, the proportion of total accidents to the total number of men at work has practically varied not at all.

Now since the accidents did not decrease, despite legislation requiring safety devices, and since certain kinds did—as, for instance, accidents in coupling, which were lessened by the introduction of the automatic coupler—it is plain that a thorough and widespread knowledge of safety appliances, such as the Amsterdam Museum supplies, would result in diminishing the appalling casualty list our industries present every year, for there are many kinds of human toil in factories and mines that have the same history of injury and death that railroading is marked with.

In the Amsterdam Museum are all kinds of normally dangerous processes constantly going

on—machine work, electrical work, chemical work, grinding, rag-picking, wool-sorting, match-making and a dozen other activities—each protected by some kind of safety device in the way of equipment or ventilation. Methods of avoiding falls, injuries by machines, explosions, awful diseases in the way of chemical poisoning as from lead or copper or mercury, injuries to eyesight by brilliant lights or flying particles, or consumption through breathing deleterious dust as in stone-cutting—all are shown in actual practice. Thus neither factory and mine inspectors nor employers can be excusably ignorant of proper precautions.

Now, according to the Industrial Commission, in New York and Massachusetts—the states with the best factory legislation and inspection in the country—there were 1,626 and 1,423 factory accidents respectively in 1899, the last year for which figures were attainable. The New York records show an annual increase in the number, probably due to more accurate tabulation. But these are for actual accidents. How much harm is done the workmen in such trades as file-cutting, paint-manufacturing, wool-combing, tanning, wool-spinning, and fifty other dangerous occupations can never be told. Such a museum then, as the one in Amsterdam, though it would provide no panacea, might spur legislators, inspectors, employers and labor unions to keep working conditions up to a far higher state of safety and healthfulness than they are now kept in many industries—even in New York and Massachusetts.

A NEW DANGER SIGNAL

TO meet just such cases as that of the Park Avenue tunnel in New York, an Austrian electrician has invented an electrical device which rings a bell in the engineer's cab on the approach of danger, and an American is perfecting an invention which will light a red incandescent bulb in the engineer's face when any obstructions block the way. Nor is the latter device an untried bit of theory. For some months the invention has been tested on a few miles of the Chicago & Illinois Railroad, and it proved so successful that they are extending it to longer lengths of track.

The idea is a simple one. A track battery is planted at the end of each three-quarters of a mile. The tracks act as conductors and at the other end of the block is a common relay. When a train breaks the circuit the relay opens, the red bulb is lit in front of the engineer of any train in the adjoining block and the light continues until the preceding train crosses into the next block of track. The signal is entirely automatic and cannot easily get out of order. If the track is clear the connection burns a white light in the cab, and if, by chance, anything is wrong with the signal the engineer knows it immediately by the extinction of both lights.

Switches have been connected in practice so that the throwing of a switch a distance ahead is announced to the engineer also. And there seems to be no reason why everything which means danger cannot be made to announce itself electrically to the man in the cab. The success of such a device will mean the doing away with much of the lumbersome routine which labors ineffectively to minimize danger to life and property.

AUTOMATICS IN GUN-MAKING

THE influence of the automatic age extends to gun-making and shows rapid advancement there. That the work of our navy during the Spanish War has given people abroad a wholesome respect for our abilities in the construction of war material is evidenced by the recent invitation of Emperor William to our naval attaché to Germany, Commander Beeler, to visit him in Berlin and explain Secretary Long's last report.

Machinery for the manufacture of ordnance has been so developed that any part of a gun can be made within a thousandth part of an inch of the correct size more easily than it formerly could come within a hundredth of an inch. All the working or movable parts of each gun are now made interchangeable, a valuable trait, after a sustained engagement, when many minor repairs must be made with celerity. After the battle of Manila Admiral Dewey was compelled to send requisitions thirteen thousand miles to the Navy Department for parts of some of the rapid fire guns carried by the vessels of his fleet, for many spare parts as well as those in service had broken during the engagement. The Driggs-Schroeder Rapid Fire Gun, however, had done excellent work, and a new semi-automatic gun recently brought out by Commander W. H. Driggs represents a distinct advance from the older rapid fire gun and extends to our ordnance the same evolution which commercial mechanisms are undergoing.

In the invention of war material simplicity must not be sacrificed to automatic action or rapidity of fire. Previous to the invention of this gun a semi-automatic gun had been brought out in Europe, but its mechanism was more complex and its rate of fire slower.

In the new semi-automatic gun which possesses the advantage of simplicity, our navy possesses the fastest rapid-firing gun in the world. In tests on the Naval Proving Ground at Indian Head, Md., a six-pounder gun of the new type was fired for a short time at the rate of seventy-five shots

per minute, and showed a sustained speed of sixty shots per minute.

Under the same conditions, the foreign gun of the same calibre with which it was compared fired forty-two shots per minute. This means that at a critical moment three of our guns would be equivalent to more than five of the foreign guns. The speed need not vary greatly whether the shots are aimed or unaimed, as the sole duty imposed on the firer is to keep the gun trained on the target. When the gun is fired it is unclamped and free to move in any direction on a universal joint. It is aimed by placing the right shoulder against the shoulder bar and grasping the pistol grip with the right hand. Thus it is as easily directed as a rifle. When firing rapidly, the trigger which is forward of the pistol grip is pulled to the rear and held there; the firing is performed automatically by the closing of the breech.

The gun is mounted on what is known as a "Hydraulic Recoil Mount," on a "Crinoline" or (cage) stand. In this mount the recoil after firing is checked by liquid in the recoil cylinder, and at the same time a spring is compressed which returns the gun to the firing position. The gun recoils, the breech remaining closed and locked until the movement is stopped by the action of the recoil cylinder. On the return movement to the firing position, the breech is opened, the fired cartridge case ejected, the firing mechanism cocked, and the breech block caught in the open position. The movement of the breech block in opening extends the coil spring on the left side of the gun, and furnishes the power for returning the breech block to the closed position. This, however, cannot take place at once, for as the breech block starts to return, it is caught and held in the open position. The insertion of a fresh cartridge releases the mechanism, closing the breech and firing the gun.

With the exception of the loading, all the operations are performed automatically, so that the gun may be operated by two men, one to point the gun and another to throw in ammunition. An idea can be had of the work accomplished by a six-pounder gun of this type, by considering that in one minute 750 pounds of cartridges are handled, ninety-four pounds of powder burned, and 450 pounds of steel discharged, and that each one of the six-pound projectiles will perforate a three-inch steel plate.

If there is any machine in the handling of which manual labor should be dispensed with it is the gun. The introduction of the semi-automatic principle produces two important advantages—a reduction in the number of each gun's crew, with the exposure of fewer men to the enemy's fire, and the avoidance of confusion around the gun during the stress of action.

BETTER WORK AND BETTER WAGES

IN the machine shop of the Bethlehem Steel Company at Bethlehem, Pennsylvania, a system of rewarding industrious workmen has been introduced that fills a unique position between profit-sharing and piece-work. The system, which in theory has a tendency to educate the workmen to a higher state of efficiency, in actual practice, says Mr. H. L. Gantt, who introduced it, has succeeded in changing the whole atmosphere of the shop in a very few months. The distinguishing feature of the plan is the union it forms between the brain of the skilled mechanical engineer and the hands of the laborer.

A competent engineer fills out a card that indicates the time it should take to perform each elementary operation of a piece of machine work with the best tools and according to the most advanced and scientific method. The tools and the method are given. With this time limit on each part of the work, the workman, if he follows directions and finishes within the stipulated time, receives a bonus in addition to his regular day wages; if he does not finish within the time, he receives the day rate but no bonus. The time limit on each individual operation keeps the man constantly aware of his chances of completing the job with speed enough to secure the bonus, and the card beside him not only helps to the end he desires, but educates him in methods he would never have adopted unaided. And as each foreman also receives a bonus according to the number of men in his gang who are bonus winners, the whole shop force coöperates to make the shop efficient. As machines out of order check the speed of output, unusual care is taken to save bonuses by keeping machines in order. As delays between operations on a complicated piece of work have been found to be the chief points of time wastage, especial attention is paid to keeping the pace keyed up at just those times. In short, specialized skill has been devoted to making manual labor as automatic as machine work.

It would be hard to find a system better calculated to bring industrial efficiency to the highest possible standard. It may be pointed out that as in certain trades, shoe-cutting for example, so high a speed must be maintained that the workman is often reduced from a man to a machine in order to do a good day's work, the keying up of workmen in any trade to the pitch of making them mere automatons is not a wholly praiseworthy operation. Whatever is gained by increase in material output is offset by a loss to the community of intelligent, ambitious members. The Bethlehem system, however, would seem to be an arrangement whereby a workman may increase his efficiency without losing the individuality that makes him a valuable citizen.

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SENATOR WILLIAM B. ALLISON OF IOWA

Chairman of the Senate Committee on Finance, whose election for the sixth term makes the longest period for which any Senator has been chosen

See Page 1989

THE WORLD'S WORK

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The March of Events

THE fist fight on the floor of the Senate on February 22d (of all days!), by the Senators from South Carolina showed a long list of lost opportunities; and for this reason it was as instructive as it was disgraceful.

The Senate lost an opportunity when it failed to punish them more severely than by declaring them in contempt and afterwards by adopting a resolution of censure. Its dignity was not very virile, but rather conventional and perfunctory. It let an occasion for prompt and vigorous action fizzle in rulings and re-rulings and long discussions and a sort of schoolroom reprimand. The Senate felt outraged. But it showed a kind of hesitancy, suggestive of care for the conventionalities rather than of a virile sense of dignity. Consider what would have been the result of very prompt and much severer punishment of both Senators. The Senate would have at once risen in the esteem of the country as it could rise by no other act. Such an assertion of its character would have toned up every legislative body in the land and in the world. It would have given notice, once and forever, that the physical bully can no longer be tolerated in decent political life. And it would have done such a service to the State of South Carolina as it cannot do by decades of legislation. It was an opportunity lost by the lack of a dignity genuine enough to assert itself with great moral force. It was a case of somewhat pusillanimous hesitation.

McLAURIN'S LOST OPPORTUNITY

AND Senator McLaurin lost the opportunity of his life by permitting himself to be goaded by Senator Tillman into a loss of temper. If, when Tillman accused him of bartering his vote for Federal patronage, he had calmly but emphatically demanded an investigation by the Senate of the accusation (which involved President McKinley as well as himself), he would have forced Tillman to prove his accusation if he could. If he failed, McLaurin would forever have stood clear, and he would have been clean out of the Tillman class of men and would have won for his "industrial Democracy" the dignified consideration of the country.

But he threw his chance away when he called Tillman a liar and provoked a fight. He classified himself with Tillman, and they will now be linked together in the public mind as long as their public careers last. Whatever hope of dignity and liberality in Southern politics may have been inspired by him is now hurt beyond complete repair. He revealed a lack of one of the prime qualities of leadership. An

ideal opportunity arose to show his own dignity and efficiency and to make plain the character of the opposition to him; but he let it pass by descending to the manners of his opponent. Doubtless there are occasions when the temptation to call a liar a liar is overpowering—to weak or excitable natures. But exchanging epithets is very like exchanging shots on the field of honor; such conduct can prove nothing but the possession of a violent vocabulary and good marksmanship. And a gentleman is not called on to do either anywhere, least of all in such a place as the United States Senate. Such lack of poise and self-restraint shows a most unfortunate weakness and it gravely discredits a man as a leader.

The misfortune is the greater because Senator McLaurin's movement for the liberalization of Southern Democracy, in spite of a somewhat jumbled political creed, has won the approval of many of the foremost men in all sections of the country. It has important and influential Southern support. It looks in the direction of a possibly strong movement. In the hands of a great leader a large section of Southern public opinion could be won to it. The reactionary part of Southern Democratic sentiment, which forgets nothing and learns nothing, might be effectively opposed in its own field by more liberal Democratic thought perfectly in line with the greater traditions of the party. There is a strong revolt against the stagnation and the tyranny of the "Bourbons." Industrialism and all other forms of activity and education are natural enemies of the sentiment that despised Cleveland and accepted Bryan. A strong leader could bring a new era in Southern political life. The opportunity awaits the man—a man who stands for the development of the people and of the land and for the complete nationalization of thought, a man, too, who might stand squarely on a Jeffersonian platform. Character and dignity and vigor could be given to the Democratic party by such a man in the South as perhaps it cannot be given by any Northern nor even by any Western man.

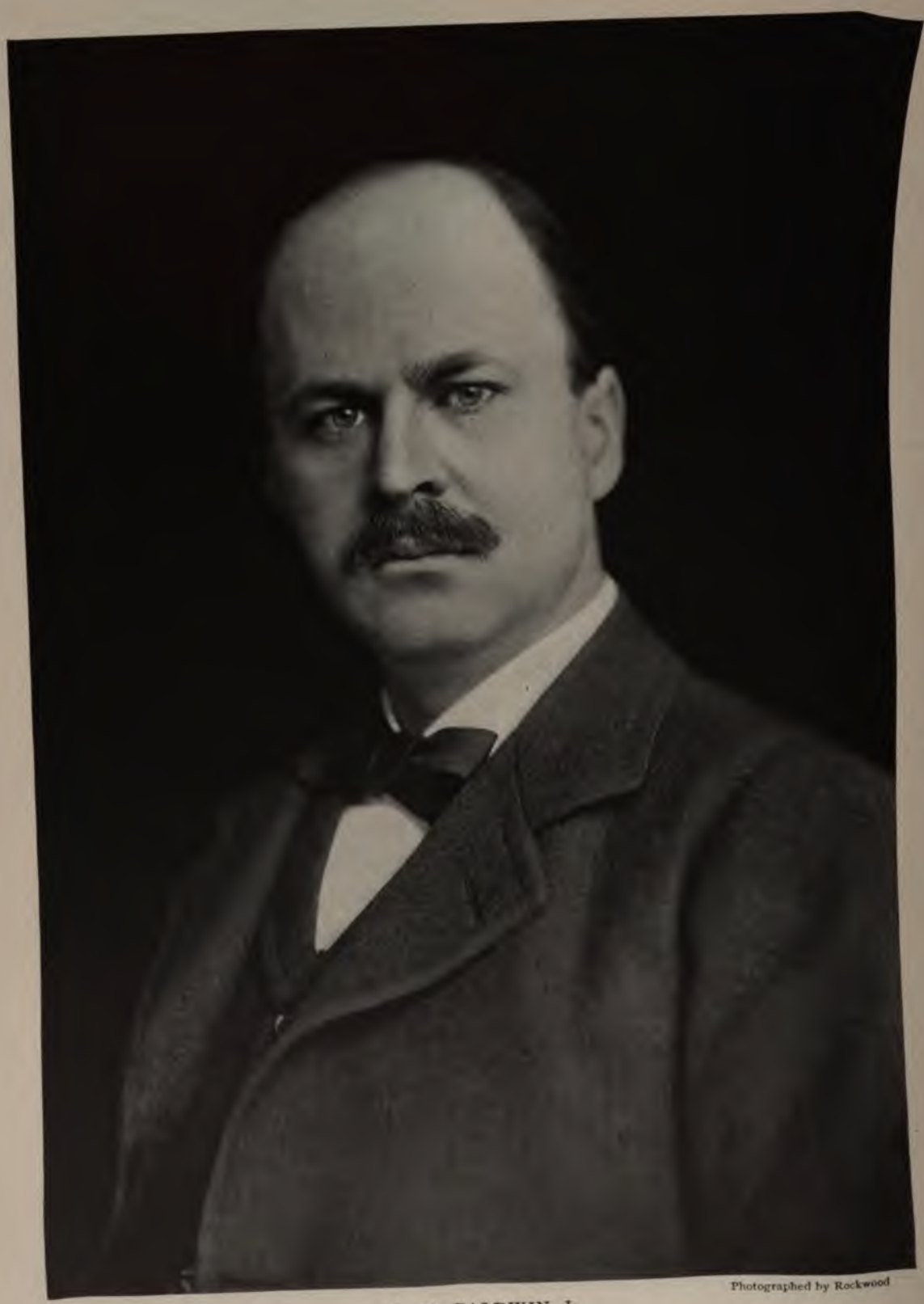
This was the opportunity that lay before Senator McLaurin. But he threw away just such an opportunity as any great leader would thank the gods for. It was a chance to show his poise and his dignity and a conception of political leadership on a higher level than ruffian strength.

THE MEANING OF TILLMAN

TILLMAN, too, is a lost opportunity. He came into politics simply as a social protest,—such a protest as might have been made by a worthy leader of the plain people, with revolutionary benefit to South Carolina, to the South and to the nation. Before Tillman rose to power, South Carolina remained not a democracy but an oligarchy of a sort that exists in no other State. Not by virtue of mere bossism, but by virtue of social prestige, the State had been ruled by men of a high type so far as social gifts and graces go. But they were as neglectful of the masses of the people as the same type of men were in the Middle Ages. In fact they belonged to the Middle Ages in their thought. The State would have remained, under their domination, a community forever set apart, cut off from the currents of the world. There was no intellectual progress, and there was little intellectual freedom. Their rule meant a continuation of existing conditions and the continued neglect of the masses of the people. The home of this oligarchy was Charleston, and Charleston itself began to decay. Its wharves rotted. Its educational institutions languished in spite of endowments. The State had indeed been saved from the debauch of Negro domination, but it had fallen into a condition of self-satisfied and even arrogant stagnation.

Here was a chance for a great leader of the people. The upper counties had always had a jealousy of Charleston, and this jealousy could have been legitimately used for the rise of the people against a cultivated but stagnant domination. What happened? The people rose, but they rose under the leadership of a bully. Tillman came into power on the wave of popular protest that happened to take the form and to use the machinery of the Farmers' Alliance. It might have taken another form. It was essentially a social revolt. The neglected man proposed to take political power into his own hands. Both factions were Democratic. It was not a political movement. The bottom rail got on top of the fence; the under-dog got the stronger grip and won the fight. That was the origin of Tillmanism.

The movement brought some benefits of a lasting kind. It established the State dispensaries, which the best students of the liquor



Photographed by Rockwood

W. H. BALDWIN, Jr.

Chairman of the General Education Board; Chairman of the Committee of Fifteen in New York City; President of the Long Island Railroad Company

problem have commended. It gave an impetus to the long-neglected public schools. It established Clemson College, for the industrial training of youth. In general it shook a sleeping commonwealth awake and made possible the rise of the people.

But the misfortune was that the movement had a bully for a leader. He appealed to many of the worst qualities of neglected Southern life. Its gentleness, its cultivation, its grace and dignity were insulted. Many of its best qualities were not only ignored but they were despised. Tillman spoke truly when he said in his apology to the Senate that his political training as Governor of South Carolina had not been a proper training for a Senatorial experience. The misfortune is that a popular movement of great value and wholly in the right direction should have been led by a man who could not bring to it the gentler qualities of Southern life.

But there is much to say for Mr. Tillman. He is brusque, even brutal. He is of the swashbuckler type of politician. He makes it hard if not impossible for well-bred men to train with him. He is a very tyrant as a political manager, and he has in a rougher form the vices of his provincial opponents But he has brought several things of importance to pass. He has some definite achievement to his credit. He is a vigorous personality and an interesting one from whatever point of view he be considered. He is the logical product of South Carolina history, the necessary result of the social system which his opponents have perpetuated. But his manners and his methods are an affront not only to the best qualities of South Carolina life but to dignified politics everywhere. The nationalization of a provincial community can never be brought about by him. He belongs to the period of the bully.

But he is as natural a product of South Carolina life as Senator Foote who once quarreled on the floor of the Senate with Senator Benton was a natural product of Mississippi, and as Ingalls and Peffer in our own day were natural products of Kansas.

THE SENATE'S MORAL VIGOR

IN spite of this disgraceful conduct on the floor, the Senate has in this generation distinctly risen in formal dignity. There are fewer unseemly personal disputes and there is a generally higher level of decorum than there was in the first half-century of Senatorial life There has, for that matter, been a corresponding growth of conventional good manners among the people.

But the question always rises whether the growth in the dignity of the Senate be not more conventional than real. The noisier and more personal and more belligerent type of Senator was not as well-bred a man, by modern standards, as the Senator of our own time. But the Senate of our day lacks a certain moral fibre that it had, or seems to have had, in the former period The purchase of seats by cash more or less directly used, and oftener by the influence of great "interests," has brought forward a type of man who has better formal manners, but has he greater manliness than his rougher predecessor? There is no fallacy easier to fall into than to praise old times at the expense of the present; and to make a true social judgment of two periods is exceedingly difficult. But any man who has carefully read the political and social history of the first half-century of the Republic and who has watched the modern Senate for days and who knows any considerable number of Senators must have moods when he doubts whether the old-time moral vigor has been kept in the undoubted growth of conventional good manners.

THE SOUTH IN CONGRESS

THESE belligerent Senators as well as Representative Wheeler (of Kentucky), who indulged in a tirade against Secretary Hay because the United States properly entertained Prince Henry and will send a special ambassador to the crowning of King Edward, are Southern men—a remark that is suggested because, other things being equal, we should expect such breaches of good manners last and least of all from representative men from old well-bred Southern communities. Other things, therefore, are not equal: that is to say, the South is represented in Congress by some men at least who have not inherited the personal dignity of the old Southern statesmen, and who do not represent the best social traditions of their communities.

Neither do they fairly represent the intellectual activity nor the new practical energy of the South. "In the House," said a

Southern man of national reputation a little while ago, who has known most Southern members of Congress for thirty years, "the South is not represented at all. Commonplace men—nearly all—are those that now sit in these seats of the mighty" This state of things is the result of a long and unbroken domination of one party. Such a political condition sends to the front one class of men of good personal character but of little force, another class that are merely successful local bosses, and a third class who are demagogues and bullies. The third class is small and loud, but the first class is large, inaudible and of little practical value.

Every man who knows our history and knows Southern life and its best traditions feels sympathy for the people of South Carolina and of Representative Wheeler's district in Kentucky, and feels regret that the energetic section of Southern opinion and the progressive element of Southern life do not find worthy political representation. Great things are coming to pass in the South. Industry is vigorous. Educators are at work with zeal. The cities are prosperous. Agriculture is improving in method and increasing the wealth of the people. Perhaps no parallel could be found to the advance of well-being there except in the development of the West during the period in which the frontier receded from the Alleghanies to the Rocky Mountains. In the old days there was never so much wealth, never so much energy, and never were there so many men of good training in the Southern States as now. The poverty of the early post-bellum period is past. Yet the Southern representation in Congress lags far behind the intelligence, the dignity, and the energy of these communities. It would profit the Southern States to take their political machinery in hand and to see to it that men of strength and dignity again enter public life. Public life was once their most honored calling, and the best men entered it. From the old level to Tillman and Wheeler is a descent that these recent unseemly events in the capitol unpleasantly emphasize in all thoughtful men's minds.

A GENTLEMAN AND ANOTHER MAN

BUT leaving the politics of the South and coming to its gentle side, the side of its best traditions, here is a gentleman—namely, Major Micah J. Jenkins. He was a soldier in the war with Spain who bore himself bravely. His comrades and friends decided to give him a sword. Lieutenant-Governor Tillman of South Carolina was the chairman of the committee to purchase it, and he had asked President Roosevelt to present the sword to Major Jenkins when he should visit the Charleston Exposition; and the President had accepted the invitation. But, when the President was forced by Senator Tillman to withdraw his invitation to the dinner at the White House in honor of Prince Henry, his nephew, Lieutenant-Governor Tillman, withdrew his invitation to the President to present the sword! While every gentleman in South Carolina was obliged to hang his head in shame, Major Jenkins sent to Lieutenant-Governor Tillman the following telegram:

"You are represented in the press as having telegraphed President Roosevelt, at the request of subscribers to the sword recently offered me through you, requesting him to withdraw acceptance to present the same. If this is so, I must decline, under these circumstances, to accept sword. Thanking you for personal kindness in the matter, I am, truly yours, M. J. JENKINS."

There are two kinds of men in the world, and this little incident shows an excellent specimen of each kind.

The President, characteristically and properly, determined to carry out his original purpose to visit the Charleston Exposition, to the very great pleasure of the people of South Carolina.

WHAT CONSTITUTES "EMINENT CITIZENSHIP"

THERE have been two conspicuous recent occasions when an effort was made to select a group of very eminent and influential citizens of the United States—men who stand for enlightenment and who command the greatest public confidence—without reference to their political creeds or their wealth or their occupations or their places of residence (except that in each case it was desirable to have every part of the country represented). The result is interesting for the light it throws on the question, What kinds of men become our most eminent citizens?

The last occasion was when Mr. Carnegie selected the Board of Trustees of the Carnegie Institution. If he has succeeded, as he recently said in a modest pleasantry, in surrounding

himself with cleverer men than he is, who are they? The Board of the Carnegie Institution is an unusual company, by any measurement. A few of them are members of the Board *ex officio*, but the offices that they hold are such as are usually filled by men of exceptional qualities. The roll is as follows:

Theodore Roosevelt, born in New York, graduated from Harvard College, public servant by profession, writer of essays, histories, and books of outdoor life, President of the United States.

Willliam P. Frye, born in Maine, 1831, graduated from Bowdoin College, lawyer, United States Senator from Maine and president *pro. tem.* of the Senate.

John Hay, born in Indiana, graduated at Brown University, lawyer, secretary to Lincoln and his biographer, editor, man of letters, diplomatist, Secretary of State.

John B. Henderson, born in Scotland, soldier of the Civil War, lawyer, Congressman from Iowa, Speaker of the House of Representatives.

Samuel P. Langley, born in Boston, architect, engineer, mathematician, astronomer, author of many scientific books, member of many scientific societies, recipient of many honorary degrees, secretary of the Smithsonian Institution.

John S. Billings, born in Indiana, graduated at Miami University, recipient of many honorary degrees, surgeon, statistician of vital statistics of the surgeon-general's office and of the census, librarian of the New York public library.

William N. Frew, of Pittsburg, an eminent lawyer, patron of the arts, philanthropist.

Lyman J. Gage, born in the State of New York, business man, banker and bank president in Chicago, and lately Secretary of the Treasury.

Daniel C. Gilman, born in Connecticut, graduated from Yale, member of the Yale faculty, and president successively of the University of California, Johns Hopkins University, and the Carnegie Institution, a resident of Baltimore and member of many public boards and learned societies.

Abram S. Hewitt, born in Haverstraw, N. Y., graduated from Columbia University, a member of Congress, Mayor of New York city, iron manufacturer, economic student, and philanthropist.

Henry L. Higginson, of Boston, born in New York, student at Harvard, business man, soldier in the Civil War, banker, philanthropist, organizer of Boston Symphony Orchestra, and benefactor, especially of Harvard College.

Henry Hitchcock, of St. Louis, born in Alabama, graduated from Yale University, Major and Judge-Advocate on General Sherman's staff, one of the founders of the American Bar Association, Dean of St. Louis Law School.

Charles L. Hutchinson, born in Massachusetts, grain-merchant, banker, patron of art, and president of the Art Institute of Chicago, treasurer of the University of Chicago.

William Lindsay, born in Virginia, lawyer, Confederate soldier, judge, United States Senator from Kentucky.

Wayne McVeagh, born in Pennsylvania, graduated from Yale, lawyer, Attorney-General of the United States under Garfield, independent in politics, diplomatist, now a lawyer in Philadelphia.

Darius O. Mills, born in Westchester County, N. Y., bank cashier in Buffalo, a California '49-er, merchant and banker, owner of a large fortune, director in many corporations and a resident of New York for the last twenty years.

S. Weir Mitchell, born in Philadelphia, student of the University of Pennsylvania, graduated from Jefferson Medical College, distinguished physician, member of many learned bodies, poet and novelist.

William W. Morrow, born in Indiana, went to California, lawyer of distinction, Congressman, United States Judge of Northern District of California.

Elihu Root, born in Clinton, N. Y., graduated from Hamilton College, lawyer in New York city, political campaigner, Secretary of War.

Charles D. Walcott, of Washington, born in New York State, Director of the Geological Survey, author, and member of many learned societies.

Carroll D. Wright, of Washington, formerly of Massachusetts, once a patent lawyer, Chief of the Bureau of Labor Statistics, writer and lecturer on economics.

Edward D. White, of Louisiana, lawyer, formerly United States Senator and now Justice of the Supreme Court.

John C. Spooner, born in Indiana, soldier,

lawyer, assistant attorney-general of Wisconsin, United States Senator from Wisconsin two terms.

Andrew D. White, scholar and author, organizer and formerly president of Cornell University, diplomatist, now ambassador to Germany.

Seth Low, of New York, born in Brooklyn, twice reform Mayor of Brooklyn, president of Columbia University, Mayor of New York, the inheritor of a fortune and a man of the highest public spirit.

Grover Cleveland, born in Caldwell, N. J., studied law at Princeton, Mayor of Buffalo, Governor of New York, President of the United States two terms, now living at Princeton, New Jersey. He declined and his place was filled by—

William E. Dodge, of New York, merchant, man of great public spirit, member of many commercial, religious, and benevolent societies.

Among these are few men of great wealth, and only two or three at the utmost who owe, in any degree, their prominence and their influence directly to their wealth. In nearly every case, their influence has been built up by public service. The more one studies the list the clearer it becomes that unselfish and straightforward public service is the most direct way to the confidence and high esteem of the people of the United States. This lesson is taught preëminently by the careers of men like Messrs. Roosevelt, Hay, Hewitt, McVeagh, Root, Wright, White, Low, and Cleveland. Devotion to science and education has brought a similar prominence to men like Messrs. Langley, Billings, Gilman, Mitchell, and Walcott. If these men be accepted as a representative group of the most eminent and influential citizens (and they seem entitled to such a distinction), their careers are full of inspiration for American youth; for it is by character and solid attainments that most of them have reached distinction, not by accidents of birth or fortune. And whenever men are selected for the highest service, it yet holds—holds as true perhaps as it held at any previous period of our history—that it is men of careers like these that commend themselves.

THE ROADS TO PUBLIC ESTEEM

IT remains true, as it has been from the early days of the Republic, that public service is the surest road to public influence and esteem. Public service is a more comprehensive phrase than political service. It is meant to include political service and more. Take, for instance, the position held by Mr. George William Curtis, by Mr. George Bancroft and by Mr. James Russell Lowell in their generation. Mr. Bancroft and Mr. Lowell had been in the diplomatic service, but it was not especially as diplomats that they reached the high place that they held in the esteem of their countrymen; nor was it merely as men of letters. Or consider such men as President Eliot, of Harvard University and Dr. D. C. Gilman, in the present generation. They achieved eminence as the administrators of great educational institutions; but in the public mind they stand also for eminent citizenship. They are the embodiment of high civic virtue. They become distinguished simply as citizens.

In every part of the country there are such men. They reach eminence by their work, but they do more than that—they compel a high degree of public confidence by their character and by their unflagging interest in the public welfare. The road to eminence of this kind is open to every citizen; and simply for the purpose of achieving distinction (which is a narrow and unworthy view of the whole subject) there is no better investment that a man can make of his time and energy than to show an earnest public spirit. Mr. Ogden, Mr. Baldwin, Mr. Hanna, whose portraits happen to be published in this magazine, each for a different reason, are apt illustrations of this wholesome principle.

While our democracy is very cruel to its spectacular heroes and shows in many small ways the proverbial fickleness of a mob, it is yet true that public opinion, when it settles into a conviction, deals justly and generously with useful men.

Lately complaint has been uttered of a lack of appreciation of men who give their lives to pure science, perhaps with some reason. But surely both the esteem and the substantial reward that have been won by many such men forbid a sweeping conclusion of neglect.

As for men of letters, the general respect paid to them has steadily risen in our country during the last half century. Especially is this true in the case of literary men who are also men of learning, such as historians. It

does not follow that every popular novelist wins respect in proportion to his financial earnings; for the public is more discriminating in bestowing its esteem than it is in spending its cash. There are popular novelists whose work has not brought them any greater social distinction than other successful manufacturers have achieved. But every man who has really put his generation under intellectual obligations can bear testimony to the passing of the social as well as the financial Grub Street. The writers who keep alive the historic complaint of social neglect, if there be such, have, as a rule, not given society any sufficient reason to esteem them.

Nor is it true that sheer wealth opens all the doors of public esteem to men. Taken as a class, it is even doubtful whether our millionaires are even justly judged by public opinion. Certainly in many ways a very rich man is at a disadvantage. A man of only a moderate fortune is more likely to win the high esteem of his contemporaries by his public spirit than a very rich man who shows the same degree of public spirit.

Since there is no practical appeal from the judgment of a democracy, it is fortunate that its judgments are in the main and in the long run likely to be as accurate as—as—well, for that matter, who else has a judgment in the long run? Public opinion is the only court that holds an unending session.

THE DEMOCRATIC AND THE MONARCHICAL STATES OF MIND

IT was a shrewd remark made recently by the London *Spectator* that it was easy for the European mind to misunderstand the meaning of the hearty American welcome to Prince Henry of Prussia. The peculiarity of the American mind and manner is that our welcome to the Prince has no deep meaning. The welcome was genuine and hearty; the polite speeches made to him in public and in private were sincere; and the entertainment provided for him was provided with the hope to please him. He was a distinguished guest; we were glad to have him; we told him so, and we tried to show him so. We are friendly to the great nation from which he came, and we hope ever to be so. But that is the beginand the end of the whole matter.

And there was nothing in the pleasant international incident to provoke European jealousy. Trade treaties, political action—public action of every sort—will be affected not a whit by the visit, except as we always trade and deal with men and nations whom we pleasantly know with a somewhat greater ease than with strangers.

But the welcome of a royal visitor to the United States does not have quite the same meaning as it might have in any European country. Neither is the popular attitude toward him the same. It is doubtful whether any considerable body of public opinion in Europe can ever quite clearly understand the democratic state of mind. The American inability to understand the ordinary European attitude toward princes has, of course, been a subject of merriment for a hundred years. There is a difference—a great difference even if subtle—between the two states of mind, a difference between the man who lives under a king and the man who does not. Their outlook on life is not the same. Yet, it is hoped, in our own fashion we know how to entertain a royal visitor pleasantly without giving warrant to sweeping inferences. Certainly our late visitor was very welcome, although we do not and cannot have quite the same outlook upon human society that he has, nor as those about him have.

SAVING THE TARIFF ISSUE FOR 1903

THE two great measures in Congress that involve definite policies of large importance are the bills to repeal the war taxes and to reduce the duty on Cuban products imported into the United States. In dealing with these Congress runs squarely up against the broad subject of the tariff. After too long a delay an agreement was reached by the leaders of the House to reduce the tariff on Cuban products twenty per cent.—that is to say, to make these duties twenty per cent. less than the rates prescribed by the Dingley law. It is expected that the Senate will favor a greater reduction.

The House decided, when the bill to repeal the war taxes came up, to permit no amendments to it. In this way a general tariff debate was adroitly avoided and the bill to repeal the war taxes was passed—unwisely in the judgment of many economists, since unusual drafts may be made on the Treasury at some early time, to cut an isthmian canal, for instance.

In the Republican management of both these measures in the House, the plan was carried out to keep the Dingley tariff intact and not even to permit discussion of it. Representative Babcock's bill to put on the free list products that compete with the products of the steel trust and its raw materials was shut off from consideration

At about the same time a meeting of Democratic leaders was held at the Manhattan Club in New York city to formulate, at least in a tentative way, a national party programme. The principal speaker was ex-Senator David B. Hill, and the burden of his speech was tariff reform. As he remarked, it is not a new issue "but it is an old one that has grown better by age." It is the only one, it may be recalled, on which a national Democratic success has been won in post-bellum times. It seems clear that party lines will be drawn on the tariff at the next Congressional election and at the next Presidential election. If the Democratic party should again make a bundle of irrelevant issues—anti-Imperialism and what not—the people may again fail to lay emphasis on the tariff. But if a campaign be conducted with the same concentration of public opinion on this one topic as was made in Mr. Cleveland's time, there may be no novelty about it but there will at least be vigor and a clear-cut political contest. Everything will depend on the personality of the Democratic candidate for the Presidency. If a man who has the robust qualities of a Tilden or a Cleveland be found, we may once more have an enlightening campaign.

TWO SUBJECTS OF THE INDUSTRIAL COMMISSION'S REPORT

THE Industrial Commission, after its years of labor, gathered together a large mass of interesting facts, but some of its most ambitious recommendations have not shown a clear way out of our difficulties. It proposed, for instance, a graduated Federal tax on corporations that do an interstate business, which includes practically all corporations. Now publicity is one thing and taxation is another. The proposition to compel publicity, such as was made, for instance, by the President in his Message, has met very wide public approval. But the taxation of corporate property is a State duty and necessity. The National Government could secure publicity without taxation; and double taxation of interstate corporations, however small it might be, would be a discrimination against corporate as distinguished from individual property.

The Commission brought forward also the old discussion of export prices that are cheaper than domestic prices of the same products. Many manufacturers, small and large, sell their wares at a lower price for export than for domestic trade. On the face of it, this seems wrong, and public opinion resents it. There is reason for resentment when the products thus sold are so protected by duties that a monopoly of the home market is possible. In other words, a tariff that enables a manufacturer to receive an abnormal profit is legitimately open to attack.

But there are many products sold for export at lower prices than for domestic trade for other reasons; and the economists might learn these reasons by a little experience in trade. For instance, a manufacturer wishes to introduce his wares in England, where there is a natural prejudice against them. He believes that if the English once begin to use his product they will find it better than the rival English product. The best method of making an entry into the market may be by selling it low, by selling it at first even without a profit. A low price is one of the methods of extending the market. And the reason for selling wares cheaper abroad than at home is sometimes found in the necessity of getting rid of surplus product without demoralizing the normal market. These methods of trade are legitimate.

In spite of the fact that tradesmen have too much to do with legislation, legislators and economists know too little about trade.

PERMANENT TENURE FOR FOURTH-CLASS POSTMASTERS

POSTMASTER-GENERAL PAYNE has not been regarded by the public as a strenuous civil-service reformer; but almost his first official act was an announcement that fourth-class postmasters may not be removed except for cause. This policy may have been determined by a higher authority. But, be its origin what it may, it is in line with the President's vigorous and well-informed merit policy. If it can be made a permanent part of the administration of the Post-Office Department,

:he largest remaining resource of the spoilsmen will be taken away from them. Such a policy need not cause the retention of any incompetent or unacceptable postmaster anywhere, but it would prevent the unseemly scramble that disgraces the country after every Presidential election. In fact a continuous scramble goes on for these places, and the time of Congressmen and of the Postmaster-General and of the President is taken up by it, to the detriment of the public business and to the :moralization of the service.

THE MIGRATION TO NEW YORK CITY

THERE is an interesting meaning in the migration of persons from the differ- t States of the Union to New York City. .is table shows the number of natives of several States that have gone to live there:

New Jersey	56,000	Vermont	4,100
Pennsylvania	36,000	Rhode Island	4,000
Massachusetts	25,000	Georgia	4,000
Virginia	22,700	Michigan	3,400
Connecticut	20,000	Missouri	3,400
Ohio	12,000	California	3,200
Maryland	9,000	Kentucky	3,100
Illinois	8,000	Indiana	2,500
North Carolina	6,500	Louisiana	2,400
Maine	5,600	New Hampshire	2,300
South Carolina	4,400	Wisconsin	2,100

The migration from New England and m populous States which have great com- :rcial interests, such as Pennsylvania, Illi- is and Ohio, was to be expected; but the t that at first sight is surprising is the ge migration from some of the Southern .tes — Virginia 22,700, North Carolina ,00, South Carolina 4,400 and Georgia 00. Some of these (no doubt many from ginia) are colored persons; but this con- erable migration across isothermal lines is t all explained by the facts of developed nmerce and industry, as the migration n the Middle States is explained, but ner from the backwardness of industry till very recent period. This tide ought now change its course; for the South offers at practical opportunities.

A GREAT NEW MOVEMENT IN POPULAR EDUCATION

FOLLOWING the Slater Fund, to aid the education of the blacks, and the Pea- dy Fund, to aid the education of both races n the South, comes an even more important help to Southern education without distinc- n of sex or creed or color. The General lucation Board, which has applied to Congress for a charter, has been organized as a body of representative men to receive and to administer funds for this patriotic purpose. They have already more than a million dollars.

Wisely as previous benefactions for a similar purpose have been administered, this broad movement has the advantage of the experience of the other boards and a new and vigorous force in addition. Mr. William H. Baldwin, Jr., of New York, is the chairman of the board; and it is not too much to say that the cause of popular education has never before had the service of a man of such energy combined with so much experience in the world of affairs. Mr. Baldwin is yet in the period of his tremendous youthful energy. He is a graduate of Harvard. He has achieved at an unusually early age a prominent position in the business world as a successful railroad manager, first in the Northwest, then as the general manager of the Southern Railway system, and now as president of the Long Island Railroad; he has won by the sheer force of his personality a foremost place among the most useful citizens of New York; he was the chairman of the Committee of Fifteen in New York, which was the most successful organization of the kind that was ever formed in that city, and its revolutionary work was done with broad common sense and practical efficiency; and he has been for years the financial adviser and friend of Tuskegee Institute. The direction of a great movement for popular education by such a man is without precedent. He will not give up his position in business affairs, of course. He will simply infuse business methods into educational help.

The board has also the benefit of the wisdom and of the experience of Dr. J. L. M. Curry, the general agent of both the Slater Fund and the Peabody Funds; of Dr. Daniel C. Gilman, president of the Carnegie Institution and president and vice-president respectively of these two Funds; of Mr. Robert C. Ogden, the president of the Southern Education Board; and it has the benefit of the enthusiasm and the services of Mr. George Foster Peabody, as treasurer, himself a Southern man by birth and a generous benefactor of education.

The aim of the board is not a "miss " aim. It is broadly patriotic. It wi w in a practical way—its personn

guarantee of that—without fads or theories, without sectional feeling, race prejudice or any aim except the building up of the neglected masses of our population. It is organized on a broader basis than any body was ever before organized for such a purpose; and its personnel includes men of Northern birth and men of Southern birth. It is not unlikely that this board may exert the strongest force in aid of popular education that has ever been brought to bear on public opinion. It ought to receive a larger fund than any board has ever had to administer; for it has machinery, experience, sources of definite first-hand information and practical ability such as has perhaps never before been brought to such an undertaking.

INVESTING IN DEMOCRATIC GROWTH

THE principles that have been carefully worked out by experience and have been demonstrated as scientific in this whole matter of educational aid are these—

(1) It is worth while to help those that help themselves, and only those.

(2) It is best worth while to help the public that helps itself, because by building up public sentiment a permanent investment is made in democracy.

These simple principles clear the atmosphere and open the way to work of incalculable value. In the first place, there is no room left for mendicancy, nor for condescension, nor for "missionary" work. The taint of charity is removed.

To give money to an institution that is maintained by private funds may or may not do a public service. It is true, for instance, that many of our colleges now have endowed scholarships that go begging because the beneficiaries feel that they become objects of charity when they accept them; and free tuition in theological schools has worked for the lowering of the type of men who patronize them. So, too, it may be true and it often is that the endowing of colleges and private schools, if they are not managed with the greatest skill, holds back the development of the proper idea of education. Education is thought of as something apart, something endowed, something that cannot pay, something that must smack of charity. It keeps too far away from the community's life to become an organic part of it. It becomes something superimposed on society, not a natural outgrowth of it.

But since there are unfortunate and backward communities where for some reason the training of the young is neglected because public opinion is not well-informed or is not alert, is not in earnest or is not able—what can be done for them? Charity is out of place in a self-reliant democracy, as it ought to be out of place. The task is not only to train the young of this generation but to train public opinion so that it will train the young of every succeeding generation and self-reliance must be the first lesson taught.

It has been proved over and over again that in such communities, whatever be the cause of their backwardness, a great and lasting service may be done by helping the public that helps itself. However poor the public may be, if it will tax itself to a reasonable limit, such taxation opens the door for help. It cannot or will not provide good schools, and poor schools are little better than none. But if the fund raised by taxation in such a community can be judiciously supplemented, always in proportion to the effort of the community—by this method real help can be given that it is legitimate both to give and to receive. It makes no paupers. It carries no insults. It is not personal, and it is not offensive. It is a contribution to democracy, and not to individuals nor to private enterprises. The money is distributed through the public channels solely for the public good. It trains the tax-payer; it trains the local board of administration; it builds up public opinion; and it thus bears fruit generation after generation.

Since it is organized to do work on this broad and scientific principle, this General Education Board is entitled to be regarded as the best agency for the wise administration of benefactions to the public welfare that has ever been organized. Its work is educational. Its field is the country—for the present the Southern States only because, for reasons that antedate all men now living, help is most needed there—help for communities, to be given without regard to sex or race.

The Board ought to receive many millions of dollars in gifts and bequests for its patriotic work. There is not another channel whereby a man may be so sure of investing his money

in the development both of the people now living and of those yet to be born.

THE NEW RELATION OF COLLEGE EDUCATION TO LIFE

AN officer of Columbia University in New York City recently compiled a list of the number of students at our largest universities. The attendance at the largest institutions is;

Harvard	5,576	Minnesota	3,536
Columbia	4,422	Cornell	3,216
Michigan	3,812	Wisconsin	2,812
Chicago	3,727	Yale	2,680
California	3,540	Pennsylvania	2,520

Total, 35,845.

This list includes undergraduates, post-graduates and students in the professional schools; and, of course, these are but a small proportion of the number of youths that are in training at all the colleges in the country. But even these numbers are large enough to show that college training, among the educated classes, has come to be regarded, not as a merely desirable experience for youth, but to a degree as a necessity. At any rate, it is fast coming to be a matter of course. The enormous increase in college attendance during the last twenty-five years is one of the most noteworthy facts in our recent social history. And it must be true that both a larger number and a larger proportion of youths in the United States in this generation receive collegiate training than ever received it in any other country at any time.

The most obvious inferences are the general spread of well-being, the ambition of American families and the very general appreciation of higher education, both because of its direct benefits and because of its social power. College life in its whole length and breadth is not so closely associated with profound learning nor with professional ambitions as it was a generation ago. The dominant motive is general culture and social ambition.

A noteworthy fact shown even by this short table of the attendance of the largest ten institutions is the presence of so many free State universities in the list. These are all young institutions, but they show the strongest movement of our time in collegiate education. They indicate the rising tide in American educational life. There is no doubt that in another generation they will have a far greater number of students than the privately endowed colleges. Wherever a State university, without tuition fees, has been planted and properly managed, the number of students has increased beyond anticipation and at a far more rapid rate than they have increased in the church colleges or in the non-State institutions While our strong, old, already endowed and historic colleges, such as Harvard and Yale and the great new endowed schools of the type of the University of Chicago, will continue to grow, the greater growth in the future will be in State institutions.

And this tendency is in keeping with the true democratic spirit. If it be true that a university is a necessary institution to a community—that it does a real public service—then it follows that the public should maintain it as a part of the public-school system. This idea is not even yet accepted by a large body of public opinion; but it was Jefferson's idea and it is now the dominant idea in many States, Michigan, for example, and Minnesota and Kansas and Wisconsin and Texas and many more. And these States are demonstrating the soundness of the plan by the very rapid growth of their free universities. The old argument that a college was necessarily an institution for the benefit of a very small part of the population begins to lose its force when State institutions receive a constantly increasing attendance.

Moreover, the State university puts education on a new and more democratic and wholesome basis. It makes it more directly an organic part of the community's life. The idea disappears that college training is a thing that only the rich or the well-to-do may aspire to; and it encourages the idea that it is good for the capable of all financial and social classes. The exclusiveness of the old education is forgotten; and the atmosphere is cleared of a hundred misconceptions of life that colleges cherished. It is significant, too, that the development of this idea was left to the commonwealths in the West. It could not naturally grow in the older States where the traditions of education had a strong hold. The growth of Harvard and of Yale and of Princeton and of such schools is the natural result of the growth of the country and of good management. But the rise of the great State universities is the rise of a new idea of education, and of a new idea of it in reference to the common good. It is the adaptation of it to democratic life.

ABOUT THE OVERPRODUCTION OF SCHOLARS

THE distinguished rector of the University of Berlin has recently expressed regret that so many institutions of learning have been established in the United States, because he fears we shall make the mistake of training more scholars than there is demand for. A certain waste of men is inevitable in the ranks of learning as in the ranks of all other professions and crafts. For some will be trained to scholarship who have no great aptitude for it and still less aptitude for getting on in the world. Already we have some such waste, and there will be more as the number of scholars increases. But there seems little danger of such a surplus of misfit learning here as there is in Germany. Our large endowment of practical sense, and, most of all, the mobility of American society are our safeguards. The American college, even the American university, is regarded rather as a general training place for youth than as a place where men dedicate themselves forever to scholarship. The graver danger is that the spirit of scholarship will not take a firm hold on enough men. There is another difference, too. In Germany many a man whose chances of success or of distinction is limited seeks a scholar's career because it seems the easiest way out of poverty or obscurity. But there are so many other easier ways in the United States that a corresponding temptation is not felt by the same class here The difference of social conditions will for a long time save us from the German misfortune.

There is still another difference which is perhaps less to our credit. It is not the number of universities, but the strength of the personalities of the great teachers that determines the careers of youth. Men of great learning, who love learning for its own sake, are more numerous, or if not more numerous they are stronger, in the German than in the American schools. They stand out as great forces in German life. We have few such men. Indeed we seem to have fallen on a generation of few really great teachers. Our youth select the universities that they will attend for other reasons than because of the presence of particular teachers of great eminence. In some of our professional schools are men of sufficient renown to attract pupils; but in our academic life there are few such. We are building universities faster than we produce great men as teachers. One of the incidental disadvantages of our easy multiplication of endowments is that we lay too great stress on equipment and too little on personalities.

For these reasons and more, the guardians of our learning are not likely to share the German fear for us. In fact, American scholarship, like most other things American, is yet in its youthful period of first awakening.

THE ENGLISH-JAPANESE TREATY AS A GREAT HISTORICAL EVENT

THE treaty of alliance between Great Britain and Japan to insure the territorial integrity of China and Korea and to keep an open door to trade in the Chinese Empire is one of the most important, for it may become one of the furthest-reaching, events of recent international politics. The treaty is to last five years; its aim is to keep the *status quo;* it seeks to maintain "equal opportunities in those countries [China and Korea] for the commerce and industry of all nations;" if one Power becomes involved in war with one other Power the other will remain neutral, but if with two other Powers the other will come to its rescue.

The meaning of it is that Russia in particular is to be checked in any design she may have on Chinese territory and in any movement that she may make to close any port of Chinese territory to the trade of other nations. And England comes to Japan's aid in maintaining the present condition in Korea. But the effect of the treaty is wider than any specific purpose of this nature.

It is, to begin with, significant because the greatest naval Power in the world admits into the front rank of nations, by such a treaty, the youngest naval Power. It is a great diplomatic triumph for Japan, and it gives her a standing that she never had before. In the next place it is practically a declaration that Russia, Germany, and France shall not be allowed to take more colonial possessions in the Far East. This is almost the same as to say that the whole earth has now been partitioned and that colonial extension must cease. The treaty, in the third place, is of great importance to us and to the world because it fortifies our diplomatic work in securing a general international agreement in favor

of the open door for trade in China. With the treaty we had nothing to do, and we are in no way, not even indirectly, a party to it. But it gives definite military and naval support to our policy.

If it lift up Japanese pride it also strengthens Japanese power; and it will enormously hasten the further development of Japan as a modern nation. There is no other chapter in modern history quite so interesting as the quick rise of Japan out of Oriental isolation into the family of modern nations. It is the only non-Christian country that has reached such a distinction. Such a movement implies greater leadership and more successful statesmanship than the Western world yet appreciates; for in Western history there has never been progress equal to this.

On the other hand, too, this alliance in effect establishes English influence and English power on the tight little islands at the eastward outpost of the great double continent of Asia and Europe, just as English power has stood for a thousand years on the tight island kingdom at the western outpost of the continent. On the eastern shore of one great ocean and on the western shore of the other English influence guards the welfare of mankind; and we, who are English and republican, hold the great continent between—in friendly relations and in full sympathy with the English-Japanese purpose, but without entangling alliances with anybody. The world seems to be getting itself in order according to the wide-reaching, natural and necessary plans of those who have fairly won its leadership; and every such great movement seems to make for the peace and the orderly development of mankind.

THE RIOTS AT BARCELONA, SPAIN

TAXATION and Poverty were the two archrioters. Heavy and unequal taxation upon food and wines which are taken into cities and towns maintains perpetual discontent. Times have been hard, and Spanish lack of enterprise prevents the soil from yielding all it might. The Government has enacted a high tariff, which discriminates against American machinery and tools, and hinders any improved system of agriculture The province of Catalonia is both poor and irritable. Barcelona itself is the trading city of Spain. Her merchants export cotton prints, silks, fruits, wines, oil, and before the Spanish-American war they carried on a thriving trade with Cuba. The war and the loss of Cuba disturbed and in part stopped that trade. Factories, counting-houses, ship-owners, and most of the population felt the depreciation of income and of values. Moreover there had been a general overproduction of manufactured goods, and business was stagnant. The Catalans, by nature indisposed to be patient, were ready for a riot; and a general tremor in the air attracted socialists and malcontents who flocked to the city in numbers. The powder needed but the spark.

On Shrove Tuesday a workman was amusing himself by throwing dangerous torpedoes in the principal street. He was arrested. The carnival crowd rushed upon the policeman, who was obliged to use his revolver. A boy fourteen years old was badly wounded. The crowd was roused to fury, and swept the streets, throwing stones, smashing windows, setting fire to carnival floats, and driving back the police. Everybody fled to their houses and shops, and barricaded their doors. The soldiers finally cleared the streets, but the city looked as if it had been sacked.

Laborers regarded this as a favorable time to demand higher wages and shorter hours, and struck by tens of thousands. Anarchists, who have always found Barcelona a congenial place, came from France and Italy. Sons and grandsons of Carlists joined the mob out of respect for family tradition. Republicans hurried to the city to propagate their faith. All these elements mingled and rioted together in one revel of murder, arson and promiscuous disorder. One can perceive by the character of the different acts whether the dominant element in the mob was socialistic, republican or Carlist. For example, the mob would not let meat be taken from the slaughter houses, nor cattle be killed, nor provisions be brought into town, nor ships discharge their cargoes, because it wished famine to add to the tumult. Here we detect the hand of the social reformer who desires to clear away the old order so that he can lay the foundation of his own hobby. On the other hand, a group of rioters found that a baker had raised the price of his bread; so they shot him. Here we perceive the Carlists, children of tradition. The burning of factories points to strikers, attacks on convents

and the Jesuit College to Republicans Other acts yield less readily to special analysis. The mob attacked the prison, stopped the street cars, pulled up the rails, burnt the tax offices, robbed and pillaged for days. The police and the infantry were powerless, and there were fears that the disorders, riots and strikes would extend all over Spain, but the Government, apparently at General Weyler's instigation, sent cavalry and artillery, and after some forty or fifty rioters were killed and five hundred wounded in various battles, the barricades were carried, the mob was put down, and peace restored.

THE SECURITY-HOLDING COMPANY

THE NATURE AND THE PRACTICAL WORKING OF THIS NEW DEVICE IN FINANCIAL ORGANIZATION, WHEREBY CONTROL MAY BE RETAINED WITH ONLY A MINORITY OWNERSHIP

[This is the first of a series of monthly articles in each of which some timely and vital subject of the financial world will be taken up]

THE security-holding company is a financial device of enormous possibilities which, outside of professional financial circles, is yet little understood. But no financial or economic subject has so held the public mind since the President directed the Attorney-General to bring suit against the Northern Securities Company to determine whether it be in violation of the Sherman anti-trust law. The discussion that has been provoked by this action of the President has thrust the subject forward more prominently than years of ordinary events would have done; and a plain explanation of this comparatively new device is timely—the more so because it appeals mightily to the imagination of economists as well as financiers; and arouses the fears of those who are disturbed by the rapid growth of great organizations

In fact, the security-holding company, while it is a perfectly logical and natural outgrowth of existing conditions and tendencies, is also a creation of such a startling kind as to rise to the dignity of a new discovery in financial management. The credit of its first use belongs probably to the late C P Huntington If he had no other claim to distinction the discovery, or the creation, of this device would entitle him to remembrance as a daring and constructive financial mind.

The device is simple, in theory at least. But the discussion provoked by the recent ruling of the Supreme Court and by the President's action has so covered up the real nature of it with politics and legal conjectures that it seems worth while to explain it in the simplest terms. It is one of those theoretically simple and powerful devices which in practice quickly becomes exceedingly complex No other device so well illustrates the swiftly moving machinery of financial management.

Suppose A be a railway company of ten millions of dollars' stock and B be another company of the same capitalization. Their combined stock is twenty millions. Suppose an individual own fifty-one per cent. of each company's stock, his holdings must be ten and a fifth millions of the stock. In order to keep control of the two companies an individual must keep control of more than ten millions of stock.

But suppose a corporation be substituted for the individual. This corporation by owning fifty-one per cent. of the stock of these two companies would, of course, control them. But the controlling corporation may issue shares of its own, as an individual cannot; and the holders of fifty-one per cent. of this corporation's stock will control it and consequently control the roads controlled by it. In other words, the holders of fifty-one per cent. of fifty-one per cent. of the railroads' stock can by this device control both railroads. Whereas to control both these rail-

roads an individual must own more than ten millions of their stock, a man or a group of men by holding only a little more than five millions of the security-holding company's stock may control them both. In other words a little more than five millions of dollars (counting all stock at par) can by this device exercise the same power that an individual could exercise with ten millions.

This supposed case is the theory, in its simplest form, and it shows the principle of the security-holding company. In practice the foregoing plain suppositions would seldom work out precisely as indicated. But it is possible that even a smaller proportion of capital might control both railways. Suppose, for instance, that the stock of the security-holding company did not represent railway stock share for share, but was watered. Then the organizers of the security-holding company might retain control of both railways by investing or retaining an even smaller proportion of the par value of the railway stock than about one-fourth.

In other words, the security-holding company is a device of enormous possibilities of manipulation and concentration, with a chance of obtaining or of retaining the control of properties without actual physical consolidation of them and by the ownership of securities of very much less than the value of half the railway properties. Such are the possibilities of the device for securing or retaining control of properties.

Look at it now from the outside or minority investor's point of view. An investor of a million dollars at par in one of the railway's stocks would own one-tenth of that one railroad. An investor of a million in the security-holding company's stock would own no share of either railway, but only the equivalent of one-twentieth of both railways, if the security-holding company's stock represented, share for share, the stock of the railways; and he would own a smaller proportion if the security-holding company's stock were issued on a different basis. The security-holding company, therefore, is a device that appeals to controlling owners more strongly than to minority investors; and it requires a greater degree of confidence in its management to attract investment than an ordinary company requires. In fact, it is a piece of machinery that can be used to advantage only by strong men who control great properties and who inspire the greatest confidence. An investor who buys stocks in such an organization buys not any concrete property whatever, but he invests in the men who manage it.

As machinery for hastening the control of great properties by a small group of men, by a proportionately small investment, the simple device is a work of genius. The actual power that the credit and the confidence of strong men in the control of great properties gives them can, by means of it, be enormously increased. By extending the operation of a great security-holding company a very much smaller sum of money could conceivably control all the railways in the Union than would be required to own even a small part of them. Men who own a bare majority of the stock of a group of railways may relieve themselves of nearly half their investment and still retain control. It marks a new epoch in the possibilities of consolidation —rather of control without consolidation.

It is little wonder, then, that it came into being somewhat under suspicion and that it has encountered criticism and opposition and provoked a succession of efforts to thwart its development. It will not be developed further till its legal status is more clearly determined; but there is little doubt that it is a device that has come to stay, whatever the decisions of the courts may be.

But like all other large organizations, security-holding companies will grow about strong personalities and great successful companies. They can have no safe and legitimate place in connection with companies that have not already proved to be permanent and sound; and in order to inspire public confidence they require even a stronger degree of confidence in their management than any other kind of financial organizations.

The delicacy and the present uncertainty of the legal status of security-holding companies were indicated by the temporary flurry that followed the announcement of the Government's suit, brought by the Attorney-General, against the Northern Securities Company, to test the question whether it violates the Sherman anti-trust law by being an organization in restraint of interstate commerce. The opinion given by Attorney-General Knox is that it is in violation of the anti-trust law. With this opinion by the Depart-

ment of Justice it was clearly the President's duty to order the suit. It did not follow, as ill-informed clamor had it, that suit might be instituted against such organizations as the United States Steel Corporation; for preceding decisions of the Supreme Court had practically restricted the application of the anti-trust law to interstate railroads; and until the suit is tried it is vain to conjecture what the result will be. Apparently strong arguments can be made on either side.

The railway cases that have already been tried under the anti-trust act and decided adversely to the railroads turned on definite contracts between independent companies to restrict competition. These were declared to be "in restraint of trade among the several States." The main purpose of these contracts, and of the contracts that were brought before the court in the Addyston Pipe Company case, were declared to be to restrict trade. On the other hand, it will be argued that the Northern Securities Company was not organized to restrict commerce, except in the same sense in which any owner of one railway by buying a competing railway prevents a demoralization of rates. The dominant motive in every such transaction is to lessen the harm done by competition, but not directly to restrain trade. Moreover, if a securities company cannot buy competing railroads, could the individual or corporate owner of one road buy a competing line?

On the other hand, if a securities company can lawfully get control of two roads why not of ten? and if of ten why not, conceivably of all?

The courts have seldom if ever had a case before them which involved such enormous commercial interests.

It is likely to be a long time before the case is finally decided in the Supreme Court, whither it will, of course, be taken. But no man who knows the difference between a large commercial or financial tendency and a restraining statute has much doubt of the ultimate outcome, whatever the court may decide. The idea of securities-companies is sure to be worked out in some form; for it is a logical outcome of the irresistible tendency to great consolidations. And great consolidations will continue as long as strong men who can command the largest measure of financial confidence find it advantageous to make them.

The fact is often forgotten, let it be again said, that the growth of consolidations is not a law of nature, but the definite work of strong personalities. Behind every great and successful organization there is a man or there are men whose organizing ability and whose character and credit are such as to compel confidence. The movement will be largely determined in the future by the same principle. Great security-holding companies will come into existence, in whatever form the law will permit, and will increase in power in proportion to the strength of the men who are behind them.

The interest that the Government's suit against the Northern Securities Company has for the economist is the appeal that this new machinery of consolidation makes to the imagination. It is a device whereby the strongest men in finance may greatly hasten consolidation, and whereby they may consolidate consolidations with an ease hitherto unknown. It is one step, and a long step, toward the conceivable concentration of control of all our greatest transportation systems by a smaller and smaller number of strong men who may actually own a smaller and smaller proportion of the real property.

The first movement against the Northern Securities Company, which holds a controlling part of the securities of the Great Northern and the Northern Pacific roads, was the application of the Attorney-General of Minnesota to the Supreme Court of the United States in a mere matter of procedure. The ruling of the court was that the plan adopted by the Attorney-General of Minnesota did not bring the subject within the jurisdiction of the court. So far no opinion, except as to a method of procedure, has been handed down.

The suit of the Attorney-General of the United States is brought to prove, if possible, that the company is in violation of the anti-trust law. The decision in this suit will be directly to the point and it will lead to a defining of the status of such an organization with reference to the anti-trust act.

The whole matter illustrates the swiftness of modern financial methods which have outrun the ability or the opportunity of the courts to define their status.

THE AWAKENING OF A CITY

HOW HARRISBURG, PA., WAS AROUSED BY THE ENERGY OF A SMALL GROUP OF PUBLIC-SPIRITED MEN

BY

J. HORACE McFARLAND

THE recent municipal election in Harrisburg, Pa., is full of encouragement and good lessons for municipal government everywhere. After a long slumber the city was waked up; and a revolutionary work was done by simple methods and by a few public-spirited men.

With an unexcelled natural situation, Harrisburg gained in population only because more people were practically compelled to live there. Few persons came to live here who could avoid its dirty water, its bad sewerage, its filthy streets, its sordid little houses and its lack of adequate parks; but its notably convenient and central location, the unique railroad facilities and a very remarkable freedom from disastrous storms brought and held people who preferred a more pleasant place of residence.

The mile-wide Susquehanna River cuts through several ranges of hills just above Harrisburg, and the fertile and populous valleys add to the natural advantages of the place selected for a city by old John Harris in 1785. He left the town beautiful, but his descendants have not cared until now to keep it so. But in December, 1900, Mira Lloyd Dock showed by stereopticon pictures the natural advantages and actual hideousness of the town, contrasted with other cities of greater cleanliness and sightliness.

The discontent even of the ultra-conservative residents became evident in May, 1901, when a citizen wrote a letter to a daily paper offering the first hundred dollars toward a fund of $5,000 to engage expert engineers to examine the city and to report a plan of improvement. The proposal met instant approval. In a few weeks the $5,000 was pledged by sixty citizens.

The first notable fact was that these contributors were not enthusiasts, but conservative citizens of the town—men whom it had been thought it was impossible to move to action. An organization followed promptly and money was turned over to an executive committee, which added to its number the mayor, the city engineer and a councilman from each branch of the city legislature. This committee employed three noted engineers—one for consultation upon filtration and sewerage, one to consider parks and one to report upon street paving. These men studied the conditions in the city. Their reports were published in October, 1901, and they included elaborate plans and estimates for the work. The recommendations of the engineers were enforced by a definite suggestion by the executive committee that certain of the plans be adopted.

Under the constitution of Pennsylvania cities may not borrow in excess of two per cent. of their assessed valuation without asking specific consent from the qualified voters at an election, and the limit of indebtedness that may be contracted by consent cannot exceed seven per cent. of the valuation. Harrisburg had a possibility of a little over more than $1,000,000 of additional debt. Plans were made for presenting the subject of improvements to the voters at the spring election, February 18, 1902. The situation was complicated by the fact that a mayor, a city controller, a city treasurer and a board of assessors were to be elected at the same time and the usual partisan fight was imminent.

The publication of the report of the experts, with the recommendations of the committee, attracted considerable attention throughout the country, and the first real help in the campaign came from an elaborate review of this report by one of the leading Philadelphia newspapers, which very warmly commended it and called the scheme under which it proposed to make Harrisburg a model "the Harrisburg plan."

At this time the sentiment of the voters was undoubtedly hostile to an increase of debt for any purpose. Added to the usual body of conservative people, a large industrial population, living in rented houses, was to be contended with. There was also a general distrust of the city government. The first suggestion of an expenditure of money for "improvements" brought out a howl from the landlords, who promptly threatened an increase in rents if the improvements were instituted.

The sixty subscribers to the original fund now formed themselves into "The Harrisburg League for Municipal Improvements," inviting others to join them in a campaign of education. To meet the honest objections of those who feared the wasting of a million dollars if it were to be spent through the usual channels, a Board of Public Works was formed (as permitted by a State law), composed of citizens who would serve without pay, and to have entire control of the improvements. An ordinance authorizing this board and providing for its appointment *before the election* was passed by Councils immediately after an ordinance had been passed submitting to the voters the question of increasing the city's debt for the following purposes:

"Three hundred and ten thousand dollars for the extension, improvement and filtration of the water supply; $365,000 for the extension and improvement of the sewerage system; $65,000 for the construction of a dam in the Susquehanna River to form part of the improved sewerage system; $250,000 for acquiring land and property for parks and for making park improvements; and $100,000 for the creation of a fund out of which the city may defray the cost of paving the intersections of streets hereafter authorized to be paved."

Three citizens of high character, approved by the league, were appointed on this Board of Public Works. Thus the very important point was secured of guaranteeing in advance the proper spending of the loan if it should be authorized.

A fund for disseminating information was now raised, a headquarters was opened, the maps and plans were displayed, visitors were invited, and a series of committees were intrusted with the work of changing the sentiment of the people. It was resolved to keep the work out of party politics—a difficult matter, inasmuch as one of the prime movers in the improvement proposition had now become the Democratic candidate for mayor.

On January 1st the campaign was formally opened. From that day until February 18th each of the three daily papers in the city was supplied with carefully prepared matter to inform the voters, in a cumulative fashion. A series of meetings began with one held in the court-house, at which the whole subject was carefully presented by a stereopticon. The filth, the bad water, the unkempt and unwholesome surroundings of the town were ruthlessly set forth, tabulations of the deaths from typhoid fever and diphtheria were presented in contrast with what should be the proper conditions under modern sanitation. Plain words were used, and this first meeting set people to thinking who had hitherto been jeering at the movement. This meeting was followed by two meetings a week in different sections of the city. These district meetings were in every case so arranged as to show pictures of the immediate localities, as well as the general scheme of water filtration, sewerage improvements and park creation. The natural beauties surrounding Harrisburg were emphasized. At some meetings a shower of questions greeted the lecturers, many of them from objectors. Some were amusing. One man said that his wife had once put a lump of alum in a tub of bluing to clear the water and the alum had set the blue color in the week's washing. He didn't want any water filtered by the aid of alum!

The women of the city have a civic club, and this organization did good work. It held meetings of its own and carried on an undercurrent of investigation and education. The names of men opposed to the movement were canvassed, and they were visited and argued with. Only one newspaper, and that a minor weekly, was in prejudiced opposition to the movement; and matter favorable to reform was admitted to its columns only by paying advertising rates.

In addition to the newspaper work the press committee prepared an abridged edition in pamphlet of the report of the experts, including maps and diagrams. It was called "The Plain Truth About the Proposed Improvements for Harrisburg." By high-school

boys from every voting precinct a distribution of these pamphlets was made to each house, followed twice a week by other literature bearing on the subject.

Through the committee on coöperation every clergyman in the city was written to and many were individually called upon. They were addressed by a competent speaker at their weekly meeting as a body. Individual letters were also sent to all the physicians and attorneys, as well as to every social, financial and secret organization in the city Visits were made to all employers of labor, and in each case every effort was made to cause investigation and study, so that the truth should be known and the prejudice of ignorance dissipated.

The men of the Campaign Committee were all active business men, but most of them gave very scant attention for a month to any private business, and not one of these enthusiasts was ever too much engaged in his own pursuits to speak, or to write, or to talk in favor of the proposed improvements. Noonday meetings were held in industrial establishments, at which speakers, in many cases the employers of labor themselves addressed their workpeople, shutting down operations for that purpose. A statistical expert discovered that the sixty citizens who had originally contributed the fund for making the investigation, being themselves less than one-eight-hundreth of the population, paid fully one-eighth of all the taxes in the city. Thus the effort assumed a distinctly altruistic appearance which went far to answer the usual cry that had been raised by those opposed to any improvement, of "the rich against the poor."

During the campaign the Democratic candidate for Mayor was openly in favor of the improvements, but the Republican candidate refused to make any statement, and it was generally understood that the Republican "machine" was mildly hostile. As education proceeded, however, these conditions changed somewhat, and both political machines instructed their "workers" either to keep hands off the improvement issue or to work for it at the polls. But the Republican candidate still maintained his neutral position.

The climax of the campaign was reached on the Saturday evening preceding the Tuesday election. A great mass-meeting was held, which was addressed by the Governor of the State, the Mayor of the city, a Rabbi, an ex-State Senator, and others Near the close of this meeting a ringing campaign song was sung and the crowd became enthusiastic It is believed that this meeting was the turning point of the campaign with many of the more indifferent voters. That same Saturday night a last and clinching argument, printed on a four-page paper and entitled "The Harrisburg Plan," was placed in every house in the town. In it, the movement was commended by the Catholic bishop of the diocese, and by representative clergymen of all the Protestant denominations. On Sunday three-fourths of the clergymen of the city either preached sermons directly bearing upon the question or adverted strongly to it in the course of their remarks. The leading Methodist preacher held a meeting for men only on Sunday afternoon in his church, at which he presented the matter boldly and strongly as a moral movement. On Monday night a final stereopticon show was given on the street at the most central point in the city.

Now for the result In a total of 11,048 votes cast upon the question of increasing the debt, the proposition for the increase scored a majority of 3,590. But seven precincts out of thirty-seven voted against the loan. Although the Municipal League kept carefully out of party politics, the Democaatic Mayor who openly favored the improvements was elected by a majority of 2,566, together with a Republican City Controller and a Democratic City Treasurer, both officials of known efficiency and integrity who sought reëlection; and these received majorities almost equivalent to that of the Mayor. Voters dropped partisanship and voted for measures and men. Harrisburg awoke, and with its beautiful location, its proximity to the centres of coal and iron, its unique climatic advantages, the projected improvements will give her a chance for phenomenal prosperity. The railroads are projecting improvements to their local facilities involving the expenditure of many millions of dollars. The State of Pennsylvania is to erect here a four-million-dollar capitol, and Mr. Edwin A. Abbey is to paint the mural decorations and to supervise the color scheme of this great building.

Photographed by H. W. Minns

THE EXPANSION OF THE AMERICAN SHIPYARD

THE DEVELOPMENTS OF THE PAST FEW YEARS BY WHICH SHIP-BUILDERS ARE EQUIPPED TO FURNISH THE NAVY AND MERCHANT MARINE WITH THE MOST MODERN BOATS — THE PROMISE OF A NEW ERA

BY

ARTHUR GOODRICH

(This is the first of a series of articles on the growth and promise of American shipping)

A CENTURY ago, when the new Republic was struggling through its early formative years, American ships were carrying across the ocean something like nine-tenths of that portion of its products which went abroad. Today, at the height of the country's prosperity, less than one-tenth of our surplus of crops and manufactured goods goes in American bottoms. Americans are paying more than $200,000,000 yearly into the pockets of foreign ship-owners to carry what we grow and make away from our shores. It is a strange spectacle—this of a matured nation whose genius has made the desert yield food for the world and evolved machines that accomplish in an hour the day's work of many men, whose factories are better equipped than those of any of the old world countries, whose railroads are systematized to the finest degree of speed, efficiency and economy, whose workers are well paid and comparatively contented—in a word, the most active and progressive community in the

Photographed by J. G. McCurdy

FROM THE DECK OF THE TUG BOAT

Photographed by J. G. McCurdy

CLOSE REEFED IN ROUGH WEATHER

Photographed by J. G. McCurdy

SPEEDING WITH LITTLE SAIL

world—allowing itself to be limited in large measure to its own shores, taking so distinctly inferior a place upon the high seas. And the spectacle is interesting as marking a transition in American history, for if Mr. McKinley was right, and "the period of exclusiveness" is indeed "past," the next few years should be an era of ship-building in the country that will rival in rapidity and solidity of growth the industrial and internal development of the last quarter century.

The coming of this new period in American shipping depends upon two resources: the ability of the American ship-builder to turn out with sufficient speed a large number of adequate vessels, and the readjustment of economic and fiscal conditions by which the American ship-owner may find it profitable to enlarge our marine fleets.

The most remarkable feature of our present condition is that the United States is potentially a ship-building, ship-owning, ship-sailing country. Compared with the natural ease with which the staunch wooden vessels were fashioned from the Maine forests, with which they outsped and outfought foreign rivals, and ran unscathed war blockades in the Mediterranean, the wonder is that our later industrial development has been so great and rapid. The tonnage of our merchant vessels a few years previous to the Civil War exceeded considerably that of our present fleet. A large proportion of the boats at that time were wooden sailing vessels of the old types. When, during the war, Captain Semmes with his English-built *Alabama* had destroyed a large number of these ships, the American merchant marine for the time being practically went out of existence. The small quota of American goods that were sent abroad during the years immediately following went in foreign ships, and American ship-owners were satisfied to carry on the enlarging trade along the coast. The development of the land resources, the sinking of mining shafts, the building of foundries, the equipment of machine shops, the installation of large and continuously growing steel plants during the decades since the war have furnished the means by which the large modern steel ships may be built without calling upon foreign aid for plate, rivet or equipment. With the Spanish war the needs of an enlarging navy furnished the largest tasks for the ship-builders of the Eastern coast and two, at least, of the Western shipyards have had the experience of building part of the fleet which is to make the United States navy the second largest in the world. And the result, together with the fact that warships for foreign countries are building in American yards, go to prove that the shipbuilder is ready for the work the future seems certain to put upon him.

Photographed by J. G. McCurdy

A FOUR-MASTER UNDER FULL SAIL

Meanwhile ships upon our inland waterways, on the Great Lakes and the large rivers were as necessary for connective carriers as were main lines of railways. As a result the fleet of boats on the Lakes, too rapidly and cheaply made, perhaps, for the rougher and longer ocean journey, has been built at the larger Lake ports. And freighting on the Lakes equals in its efficiency the rest of our local carrying service. Nor do these great steel hulls with capacity reaching up to 7,500 tons

Photographed by J. G. McCurdy

OUTWARD BOUND

furnish the only work to keep the compressed air and electric machines driving away in the hands of thousands of workmen in the yards on the Lake shore. Smaller steel vessels for ocean and rail service, boats that wind through the Canadian canals to the sea, boats for trade in the West Indies and, most striking of all, the ships built after the model of those for the Canadian canals, which were tried in the typically American experiment of a line from Chicago to Europe via the Lakes and the St. Lawrence have been constructed on the Lake shores. Now that this last project has been abandoned the ships are plying along the coast. Added to the various productions in the Lake yards are a few boats for the Pacific trade. All this activity has demanded rapid preparation of materials and has furnished a test of our capacity to build quickly steel ships entirely of American materials.

How the test has been met can be shown in a single incident. Ore from the Mount Iron Mine in Minnesota has been regularly, of late, mined, shipped to Duluth and from there across two lakes to Conneaut, unloaded,

Photographed by J. G. McCurdy

THE BARKENTINE *COUNTRY FORD*

Photographed by J. G. McCurdy

TOWING IN FROM THE CAPE

carried to the furnaces, converted into steel ingots and made into ship plates—raw ore in Minnesota turned out steel plates in Ohio ready to be riveted into the sides of a ship—in ten days. Many of the Lake yards, limited somewhat at present to building for Lake service, are equipped to construct within reasonable time vessels of any known size or strength.

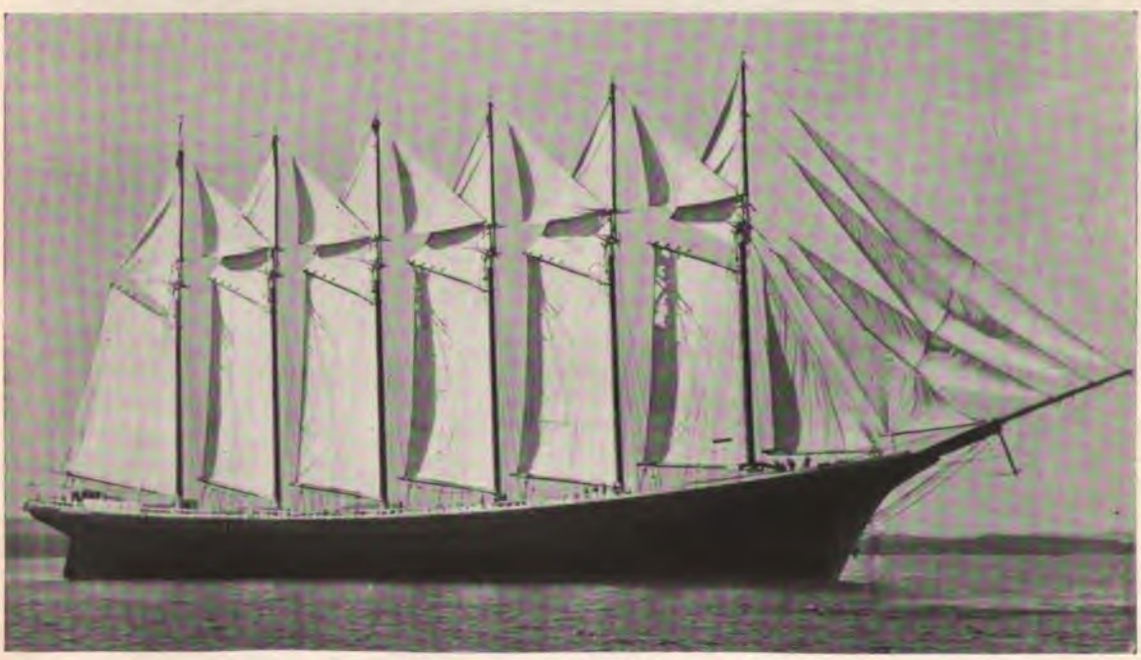
On the Pacific Coast the Puget Sound country has become to the West what Maine once was to the East. In the making of wooden ships the country about Seattle can compete with the world. Nowhere else is there such material for masts and spars so near tide water. From the Sound region goes decking and other material for war vessels to Germany—one concern having a contract calling for four or five cargoes annually. Wooden ships of all types for coast service have been fashioned from the Washington forests and enjoy the almost perfect natural harbor facilities of the coast. And the iron and steel in-

THE NEW SEVEN-MASTED SCHOONER
The latest development

dustries developing rapidly promise easy and economic building of steel ships in the early future.

Meanwhile the largest ships in the world are being built at Groton, Connecticut, to float around the Horn and make a beginning of the fleet which will connect the Great Northern R. R. and Seattle with the Orient. Nor should it be forgotten that the warship *Nebraska* is being built and the torpedo boat *Rowan* has been launched from the Moran yards at Seattle.

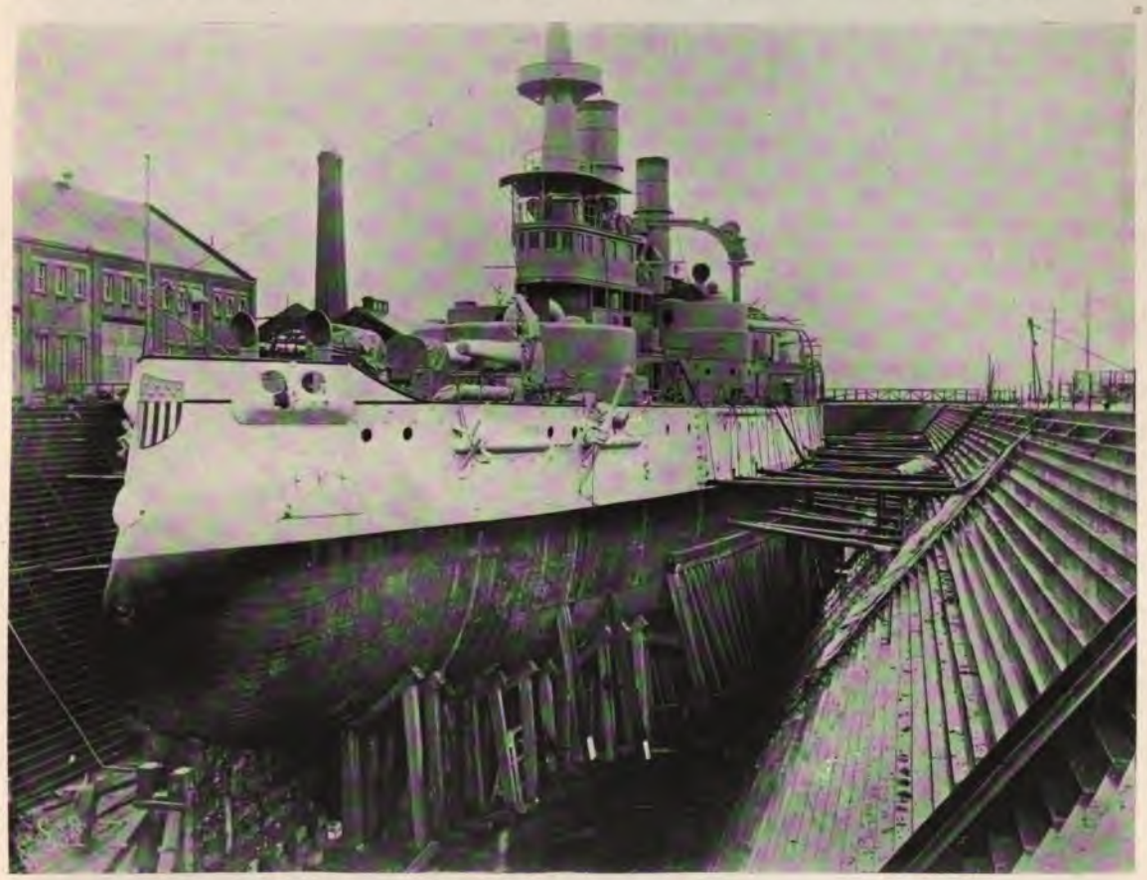
The extent and growth of shipbuilding in this section has been enormous. Not less than 2,500 men are employed at it in the Sound region and Gray's Harbor. The pioneer builders were Hall Bros. In 1873 they started in Fort Ludlow, building a two-mast eighty-ton schooner, the fittings and riggings of which, and for others succeeding as well, must needs be brought up from San Francisco and around the Horn. At the present time this same firm are building principally six to twelve hundred-ton schooners. A lit-



A TYPICAL SIX-MASTED CARRYING SCHOONER

A TORPEDO BOAT IN DRY DOCK

tle history of some of those old-time vessels will be of interest to the shipping world, for they have gone into all the ports of the globe. Their names are familiar to seafaring men everywhere. There was the old *S. M. Stetson*, the bark *Forest Queen*, of which Captain Burns was master; then came the old *Dashing Wave* and the *King Philip*. Those three were very fast vessels for those days, and all through the seventies they were close rivals in speed. The one holding the record carried a broom at her masthead, like Van Tromp of old. There was the one hundred and twenty-ton *Annie Gee*, the wonderful five-masted schooner *Inca*, that triumph of its day, the revenue cutter *Richard Rush*, the great tug *Wanderer*, the pilot boats *Lady Mine* and *Bonita*, the latter of which was sunk by the ramming of a crazy whale off San Francisco harbor but a few years since. Hall Bros. Co., as before remarked, were the pioneers. In '73 and late as the early eighties they had the only shipyard of importance on Puget Sound. Then Doncaster started in at Seabeck, and built as many as three vessels at a time. Hall Bros. have their one hundred and fifth vessel on the stocks today. There are today two shipyards in Tacoma, two in Everett, two in Seattle, one in Blakely and three on Gray's Harbor. To show something of their character and growth, and the growth of the shipping and ship-building industry, the career of the Morans is worthy of note. Twenty years ago or less Robert Moran, even now hardly in the prime of life, started his modest little shop on $1,000 of his own and $500 of borrowed capital. The plant of the Moran Bros. Co. today is worth millions. A few weeks ago it issued $500,000 of five-per-cent. bonds with which to raise money to complete the amount of ready cash necessary to build



A BATTLESHIP IN THE YARDS

AN OLD-TIME WOODEN SHIP

Photographed by J. G. McCurdy

Photographed by J. G. McCurdy

THE MODERN IRON SHIP

Photographed by W. H. Ingram

THE *SARATOGA*

United States Navy training ship

Photographed by J. G. McCurdy

AN UP-TO-DATE LUMBER CARRIER

Showing the deckload

the battleship *Nebraska*. New York City took $300,000 worth of those bonds at a premium, while Seattle bankers secured the other $200,000. That plant has its own dry dock, marine railway, machine shops, sawmills, foundries, sail lofts and all the vast paraphernalia of such a business. Tacoma has a huge dry dock on Quartermaster Harbor, eight miles up toward Seattle.

Last year Oregon built three sailing vessels, California, seven; Washington, sixteen; the aggregate tonnage of the sixteen being 17,811. Oregon built eight steamers, California, eleven; Washington, twenty-seven. All these boats, sailing and steam, were in excess of 250 tons each. The number of lesser craft built on Puget Sound was legion.

Down at San Francisco, which, with the opening of the Oriental trade should take a more commanding position among American ports, are the yards of the Union Iron Works, where they are building armored cruisers, a battleship, torpedo boat destroyers, submarine boats, a monitor, and steamships for the coast trade with South American ports and the growing trade with Hawaii. The yards, extending over nearly thirty acres with a dozen acres under cover, have a water frontage of upwards of 2,000 feet, off which the channel runs full enough for the deepest draught vessels. Here ships are not only built but are entirely equipped, except in the detail of upholstery. While the plates are being riveted into big black hulls of steel, all

Photographed by J. G. McCurdy

A TYPICAL FOUR-MASTED SCHOONER

A fast boat built on clipper lines

Photographed by J. G. McCurdy

AN OLD STYLE BARKENTINE

With double decks

the auxiliary engines and valves are being designed and made, the steel and bronze fittings are being cast, and the wood is being sawed and planed and finished into the shapes and designs demanded for boat's furnishings. A large machine shop, with its great lathe, boring mill and planers, has more than thirty-five thousand square feet of floor space, and over the big tools run six electric cranes having a capacity of from five to six tons each. Every tool in the shop can be reached either by these or by individual hydraulic cranes. In the brass foundry, boiler shop and erecting shop, are also powerful overhead cranes. Six face plates are imbedded in the floor of the last building with a result that an absolutely true surface is available upon which to erect the engines. A separate building is set aside for the erection of water-tank boilers. Over the half dozen ways running down to the water's edge is heavy timber scaffolding carrying traveling cranes which lift the big plates into place on the hulls. An hydraulic lift dock like a long steel platform, worked on the principle of an elevator, can raise vessels weighing fifty thousand tons to the level of the wharf. It was from these yards, it will be readily remembered, that the *Oregon* was started upon its famous journey around the Cape to join the Atlantic Squadron in the Spanish-American war.

Photographed by W. H. Ingram

ON INLAND WATERS

The demands of the new navy in the main have given the impulse which has developed the capacities of the Union Iron Works. The demands have been fully met and given the additional call for a large number of merchant ships to be used in trade with the East, and

Photographed by J. G. McCurdy

AN IRON FOUR-MASTER, WHEAT LADEN

A LAUNCHING AT THE MORAN SHIPYARDS, SEATTLE

SUBMARINE BOATS UNDER CONSTRUCTION

Photographed by Perri P. Pullis

LOOKING DOWN SEATTLE'S BUSY WATERFRONT

it is fair to presume that new companies would spring into being, the old concerns would enlarge their plants and with the only partly developed iron and steel industries of the West forced into a more rapid growth the Pacific Coast would in a short time be able to build up a great merchant marine. And this will be necessary if the immense opportunities in China and the East are to be seized by American manufacturers, growers and ship-owners.

All along the Atlantic Coast, beginning at the north with the Maine yards, which have been building ships for a century, down to Newport News near which the destruction of American shipping began in the Civil War, a large number of ship-building concerns, great and small, perfectly or partly prepared for building ocean-going vessels, have been competing for the small number of boats—chiefly for the coasting trade—which ship-owners have thought it profitable to order. Many experiments have been tried and vessels built for an increased system of national carriers upon the ocean. The line from New York to Buenos Ayres will be remembered as an example, which failed because American shippers found it cheaper to send their goods to England and from English ports in English vessels to South America. A new and striking experiment is that of a Massachusetts coal company which has had a large ocean-going tug built at the Bath yards to tow huge barges of coal to Cuba. This follows the Standard Oil Company's successful towing of oil barges between New York and Gulf ports, and suggests the possibility of towing large cargoes across the Atlantic—a manifestly speedier method than by sailing vessels and having only the risk of heavy storms as a source of impracticability.

The force that has developed the capacities

Photographed by A. A. Gleason

SCHOONER AND COAL POCKETS

At Charlestown, Mass.

Photographed by J. G. McCurdy

THE ONLY FIVE-MASTED SCHOONER ON THE PACIFIC COAST

of Eastern shipyards, as in the case of the San Francisco works, was the Spanish war with the impetus it gave to the navy and the considerable number of merchant vessels which were taken for transports and auxiliary service. There is scarcely a well-known ship-building concern on the whole length of coast that is not preparing some steel ship for the Government. Big battleships with a displacement of from 12,000 to 15,000 tons and a speed of from eighteen to twenty-two knots are being built or finished at the Cramp yards in Philadelphia, at Newport News, at Bath and at the Fore River yards in Quincy, Mass. Slightly smaller but, on an average, speedier armored cruisers are building at Newport News and Philadelphia. And a large number of protected cruisers, monitors, torpedo boat destroyers, torpedo boats and submarine boats are distributed along the shore at Bath, South Boston, Quincy, Elizabethport, Philadelphia, Sparrows Point, Baltimore, Wilmington, Richmond and Newport News. By 1904 more than a dozen large ships will have been added to the navy and more are planned. Because of the enormous capacity of our iron mines, and a splendidly organized steel industry which

THE STEEL STRUCTURE OF THE SHIP

is building bridges and furnishing material formed and unformed to all parts of the world, because of an unequaled equipment in the shipyards themselves in labor-saving machinery and well-paid, intelligent workmen, comes this spectacle of a nation stepping in one long stride from naval weakness to naval power on the high seas. It would not have been possible a generation ago, perhaps not even a decade ago, but out of the swift activity of these years of national growth has been born an almost unconscious power so great that we

United States ordered a half-dozen submarine vessels before the European nations could be brought to believe that the Yankee scheme had been accomplished. Since then the *Fulton* in a test has lain at the bottom of Peconic Bay for fifteen hours while a heavy storm raged above her unfelt by the men beneath her decks. Built wholly of steel the vessels that are now being constructed will displace about 120 tons and will cost upwards of $175,000 each. Floating, they are propelled by gasoline power and have a speed of ten knots.

ALONG A TYPICAL RIVER FRONT

who possess it scarcely know its scope. The Yankee who lifted himself by his own bootstraps was prophetic.

Perhaps the most striking single development in naval architecture, and one which is the direct product of American invention, is the successful submarine torpedo boat. American genius has been at work on the idea for a century, and when Mr. Holland finally made it practicable and built the first almost human little machine that could float, swim, dive and fight at the will of the men she carried, the Submerged, an electric motor drives them through the water at eight knots. They carry fuel for a fifty-mile trip under water and for 2,500 miles on its surface. From the conning tower in the centre of the three compartments telephones and telegraphs carry orders to the half-dozen men who are necessary to handle the boat. For them, when the boat is submerged, air is furnished automatically from steel tubes, and the air supply is assured for a number of days. The capability of these little boats for destruction

WHERE THE BATTLESHIP *NEBRASKA* WILL REST

The staging and roof in the background will support an overhead track on which materials will be run out over the vessel

BIG VESSELS PASSING IN THE NEWPORT NEWS DOCK

without danger to themselves is almost unlimited, and their wide use is likely to remodel both the armament of larger ships and their methods of fighting

To all these new boats for the new navy the highest grade of material and workmanship have been given without limitation of expense. As for armament, the mills that are furnishing armor for the new Russian ships, and which are ready at any moment to double their output, will scarcely fail the Government's need And it is a pleasant thought that a dozen years from now these ships will still be comparatively new, while many of the vessels of the foreign navies will be antiquated.

While the building of the new navy has furnished the initial and most potent force in the expansion of the largest Eastern shipyards, other demands have added to the impetus, and have created a great number of smaller plants. In nearly every inlet or harbor from Maine to Norfolk, sea-craft of various kinds are building—fishing boats, small coasting vessels, barges and pleasure craft running a wide gamut from miniature fifteen-foot catboats to the Emperor William's yacht *Meteor*. Several concerns—notably one in New York—have been rapidly enlarged owing to the demand for steam yachts and launches.

These Eastern yards divide into two classes —those which build nothing but wooden ships and those which have the equipment for making steel vessels. The plants of the former are simple. A frame building or two protect material and a few pieces of machinery. The wood comes from Maine and Southern forests and is formed and hammered into boats that do not differ radically from the sailing craft of the early part of the century The big schooners with six masts and an enormous carrying capacity are a late development. Standing out among these wooden ship-building yards is the Sewall concern at Bath, which has been building sailing craft for upwards of two centuries.

The steel-working yards, on the other hand, demand large capital and large equipment. These are the modern plants, noisy with the rapping of compressed air machines, the hoarse rattle of traveling cranes, the clang of the forges and grating buzz in the machine shop. Here are dry-docks in which two big steamers can pass each other, and so situated that within an hour after the vessel's entering the whole force of the yard's activities can be concentrated upon the boat's repairs. Here are great overhanging cranes which carry tons upon tons of steel over a hundred workmen toiling beneath, by the mere magnetic force of an electric current. Here is every known machine, enormous and delicate, which will help bend and pierce and rivet and plane the great steel beams and plates into a ship. Here an army of upwards of 45,000 men are at work. These are the expanding yards of the present and future, and the rapidity of their development is illustrated in the quick rise of the Fore River yards at Quincy and the plants at Baltimore to an important place among American concerns, and in the making of a yard and the two largest ships in the world at New London in the short space of two years.

In these yards—old and new—the new navy is being built and first-class ships ars being furnished to foreign Governments. Here, too, can be seen the beginnings of the new merchant marine. In the hope of some legislation by which the Government will help to build up the yards and overcome the cost of handling the ships when built—for the American seaman like every other American worker must receive a decent wage—a number of ship-owners have placed orders for ocean carriers. The Great Northern ships are of course merely a means of lengthening the railroad's lines and influence. With the rest of the fleet which is proposed they will be a considerable power in our accepting our opportunities in the East. Besides these, two ships of over 13,000 tons are being built for the Atlantic Transport Line at Camden, two more of nearly 10,500 tons at Sparrows Point, and two of nearly 9,000 tons at Camden. The big *Kroonland*, which was lately launched at Cramp's, and her sister ship, each with a tonnage of 12,200 are being prepared for the American Line. Two 11,000 ton ships are on the ways at Newport News for the Pacific Mail Steamship Company and two steamers of nearly 10,500 tons are being constructed at Sparrows Point for the Boston Steamship Company. At Camden, three smaller ships running from 4,500 to 8,600 tons are building for the Hawaiian Line. And numerous tank steamers and large barges are partly completed. These are the beginning. Means will certainly be provided by which, in this as in other American industries the ship-

owner and the ship-builder will be able to furnish better results for the same rates which foreigners charge. Perhaps the Government will help them as it has our other industries. Perhaps they will be able to make their progress alone. A single instance of the economy of high-priced American workmanship can be seen in the *St. Louis* and the *St. Paul*—built at Cramp's—whose engines burn 350 tons of coal while those of the *Lucania* and *Campania*, which cross the ocean in only a half-day faster, burn 550 tons.

The ship-building industry is already expanding. In the West the coast trade and the promise of commerce with the Orient has furnished much of the impulse; around the Lakes, the need of American carriers on American waters; and in the East the new navy and the beginnings of a great merchant marine. The ship-builders are ready to meet the demands of a larger future. Behind them, the steel mills are ready and the saw-mills and the forests and the mines. The expansion of this industry, which means the further development of American resources and which looks outward to a dominant national position upon the seas and in the world, will write the next chapter of American history.

A CHINESE NEWSPAPER IN AMERICA

HOW TONG KING CHONG DEFIED THE CHINESE GOVERNMENT, FOUNDED A JOURNAL IN SAN FRANCISCO AND CARRIES ON A GREAT POLITICAL PROPAGANDA—AN INTERESTING NEWSPAPER OUTFIT

BY

MORRISSON PIXLEY

TONG KING CHONG is a remarkable Yellow journalist in two senses of the word. He is the editor of the San Francisco *Mon Hing Yat Bo* (Daily Current Literature), better known to Americans as the *Chinese World*. He is the controlling spirit of the most influential Chinese newspaper in the United States. Since it is published beyond the reach of the Censor it is more radical than any other paper in the Chinese language.

The great work of his life has been his struggle for the restoration of the Emperor Kwang Hsu. For this he has fought in spite of threats from the autocratic government of the usurping Dowager Empress. The officers of the Empress seized the members of his family in China, and confined them in prison to force him to cease his efforts. It is a strange situation that Kwang Hsu should be the admitted ruler of his people, that writs should run in his name, his seal be the seal of the Empire, and even the date upon the calendar should be the 27th year of the rule of Kwang Hsu; and yet Kwang Hsu does not reign, and the Dowager holds him a prisoner in his own Kingdom.

Before the *coup* by which the Dowager put herself in command of the Government, the *Mon Hing* was a weekly paper of strong reform principles, reprinting the news from China which came across the Pacific and with it the occurrences of interest which happened among the scattered members of the Chinese colony in America. The paper at that time was printed on a lithographic press. Every character in its four pages was carefully drawn on transfer paper and then applied to the stone. Even if the method was not modern the press surely was, for it was driven by electricity.

As soon as it was known that the Emperor was out of power, the Chinese Empire Reform Association was incorporated in California to assist in restoring him to his throne; and of this association, Mr. Tong was managing director. At the same time similar societies were formed in Australia, Singapore, the Hawaiian Islands and wherever there were large Chinese colonies. All through China itself, secret societies were organized for the same purpose. The greater part of this work was done under the direction and advice of Kang Yu Wai,

who had been counselor of the Emperor in all of the Western reforms which he had been deposed for inaugurating. Kang Yu Wai selected for his assistants Leong Chi Tso and Leong Chi Tin. Kang is now in Singapore. Leong Chi Tso divides his time between Australia and Hawaii, and Leong Chi Tin is traveling in the United States.

The work of the young editor soon showed itself of the greatest importance. There was no paper in China which dared to publish the truth about the Emperor or the Dowager.

The Empress was fast dragging the country into war by her insolence to foreigners, and her tacit encouragement of the Boxer party. To bring all of his countrymen as rapidly as possible to a realization of the fate in store for China if the Emperor were not restored to its throne was the task set for itself by the Reform Association. At this time in addition to his work on the paper and in the Reform Association, Mr. Tong found time to write an article for a San Francisco paper, under the caption, "How we shall dethrone the Dowager." This was long before the war broke out, and before the world had any suspicion that such an event might occur. It was the first forecast in an English paper of Chinese events to come. It was the first accurate prophecy of the upsetting of an empire.

The imprisonment of Tong's mother and his seven-year-old brother in China, as hostages for his appearance to answer a charge of treason, followed shortly after this publication. A return to China at that time would have resulted in his own decapitation, and in the decapitation of the members of his family. Since he would not go to China, the elders of his native village, who were his great uncles, were also seized and put in confinement. Then Tong sent a younger brother, who was American born, and therefore a citizen of the United States, to secure their release. On his arrival he found that the arrests had been made at the demand of Ho Yow, Imperial Consul-General at San Francisco, who, by the way, is a brother-in-law of Minister Wu Ting Fang.

There seemed to Tong but one way to help his family, his friends, his Emperor and his country, and that was by the slow method of building up the power of the Reform Association. It was up-hill work. The very word "reform" was distasteful to the ultra-conservative Chinese of the higher classes, and the lower classes were not accessible through the columns of a newspaper. To reach them, Tong went on the lecture platform. He hired the Grand Theatre on Jackson Street in San Francisco, and there night after night he harangued audiences of coolies, who felt for the first time the sense of political freedom and had the delight of listening to free speech in a free country.

When the war in China broke out it was necessary to make some explanation to the Americans of San Francisco with regard to the attitude of the Chinese in San Francisco. All Chinese looked alike to the Americans, and the fact that those in San Francisco were as different from the Boxers in China as Mexicans are from Canadians was not understood. For some time it was feared that mobs might attack them. To ward off this danger Tong started another paper, known as the *Oriental and Occidental Press*, which was published in English, to explain that the Chinese of San Francisco were all Cantonese, that the rulers of China were Manchu Tartars who had conquered China proper and were holding it in a sort of servitude, that the Boxers were of this Northern race and that they were killing ten times as many Cantonese as Christians, and that the Canton Chinese of San Francisco were willing to volunteer to go to China and fight Boxers. The result was that not a single Chinaman in California was molested during the time that reports of horrid atrocities from China were coming over the cable. When the end of the trouble came there was no further need of this paper and it was discontinued.

But thousands of American Chinese became members of the *Po Wong Wocy* (Society for Assisting the Emperor). Money in satisfactory sums began to pour in. From Singapore and other places in the Far East came donations of $100,000 each from rich merchants. Americans became interested. One of them, Homer Lea, a student of Stanford University, became so impressed with the sincerity of the reformers that he decided to offer his services to the *Po Wong Wocy*. They were accepted and he immediately set about securing volunteers among army men and others who understood drill and tactics, and who were willing to follow him to China and to assume command of Imperial Reform

:s. Just as Lea was about to take the ımer for China, having all the time worked :h the greatest secrecy, his plans were dis- ⁄ered by agents of Consul-General Ho _ ow, and the scheme was published in the \merican papers of San Francisco as an act f treason against the Chinese Government. :a's departure was delayed for some time. ıt later he went secretly. Although his ıeparture was again discovered by the ever- watchful Ho Yow and reported to the papers, t was too late. He is said to be successful ı China in his agitation.

With the increasing power of the Reform ssociation Mr. Tong changed his paper from weekly to a daily and added an English sec- n, which appears once a week and gives ranslations of the more important pieces of ıews that have been published during the week. He did this because many of the im- ɔrtant news items of the Chinese world had :n translated by the American papers of ın Francisco and published as cablegrams. r. Tong wishes his own paper to get the ..redit for them in the English-speaking world.

The practical part of Chinese journalism in nerica is enormously difficult, and the in- est in it is proportionate to its difficulty. ere is first of all the colossal alphabet of ɔrd-signs—fifty thousand of them and no vo of them alike. To give a full flow of ıguage there must be as many separate ɔvable type pieces for each one of these ıs as will serve to repeat any one word as ny times as it may be used in one issue. tributing the type and laying out "the ıe" is a work of months. Unless one ows the word by sight there is no way to what the character means. To look in dictionary would be hopeless, since the ıracters have no sequential indications ɔn them.

To hire compositors who can memorize the ·ation of each character in the big type case ınother trial which is equaled in difficulty ıy by the efforts to secure editorial writers ıo dare to use free speech in a free land, ıen they know that their own necks will be ..retched if they should return to China, and that their relatives there will be held person- ally responsible for any treasonable utterances at the paper may publish. Again, the type undry is six thousand miles away in Yoko- ıma, for, since the Chinese Government will not permit the export of type for reform jour- nals, it must all be cast in Japan. Since each Chinese character is a whole word in itself, every missing type requires that a matrix be carved and type cast in the office by a process very like the moulding of a bullet

It would be impracticable to have the type case laid out with the whole fifty thousand characters of the language For convenience, therefore, about ten thousand of the more common words are selected and the vocabu- lary used in the paper is confined to them. Even with this limit the type case is about sixty feet long and five feet high and in a day's work the compositor has to walk about twenty-five miles up and down in front of the cases. The type runs up and down the col- umn, and the reader reads from right to left.

In order to set the type, seven-column "composing sticks" are used and the whole column is set as a stickfull. No "justifying" is required because every character is cast upon a body of standard size.

A curious custom of the office is that the manager and all the employees eat there Two meals a day are served, breakfast at 9 and dinner at 4. This promotes *esprit de corps* among the employees; and since many of them are financially interested in the paper, it gives an opportunity for an interchange of ideas About twenty men are employed, every one of whom is dressed in the same sort of clothes and writes the same characters that were used in the time of Confucius.

The circulation of the paper is scattered all over the United States, the islands of the Pacific, and the portion of China south of the Yangtse.

During the plague scare in San Francisco, the whole Chinese portion of the city contain- ing twenty thousand people was quarantined. Cordons of police and barbed wire trochas surrounded the place and the poor who lived from hand to mouth had no way to get out and to earn anything. Starvation was slowly coming upon them and provisions every hour were rising in price. Generous Americans were sending in rice and vegetables, but the small wage earners who depended on their daily earnings for their daily food were so nu- merous that this outside aid was insufficient Violence was advocated by many of the Chi- nese who knew that there was no plague and could see no reason for the inhuman confine-

ment to which they were subjected. It was a hot day in Chinatown, which is located in a valley opening to the south-east and sheltered from the bay winds. All through the smaller alleys were hundred-ton piles of garbage accumulating against the dead walls of buildings, and reaching across the narrow streets. These were beginning to reek in the intense heat.

A new menace threatened the district. The Board of Health had forgotten about arrangements for garbage removal when the place was bottled up.

Tong saw his chance. He posted a placard on an upper balcony of the *Mon Hing* office, which read as follows:

"Quarantine will be raised today."

Then he went to the telephone office, called up the Secretary of the Board of Health and said: "Accumulating garbage in the streets of Chinatown threatens to start typhus fever if not removed. The *Mon Hing* demands relief for the people of the Quarter."

Almost as soon as the placard was out, the few stragglers on the street collected and the sidewalks, which had been almost deserted, filled with excited Chinese. The street in front of the office was packed. Some thought it a hoax. All looked serious. If the quarantine were not released, trouble had been started and there would be no stopping it short of bloodshed.

Tong looked down upon the swaying crowd and said: "There will be trouble for me if the quarantine is not raised."

In the meantime a hasty meeting of the Board of Health had been called. The necessity of making some provision for instant removal of garbage was at once seen and within two hours after the *Mon Hing* had put out its "guess-work" bulletin, the English evening papers were out with extras in the American part of the town, which stated in seven-column heads, "Quarantine will be raised at four o'clock."

TOLSTOY

BY

HENRY D. SEDGWICK, JR.

I

IT might, at first sight, appear hard for an American to pass a just judgment upon Tolstoy, for in some respects he has been singularly un-American. The two spacious departments of human interest in which he has been so stately a figure, Religion and Art, are, out of all the great departments of life, the two in which the American, perhaps, is the least curious, the least receptive, visitor. Tolstoy has always demanded passionately of Religion that it should teach him how to live, while we regard it, to use his phrase, as one of the Epicurean consolations of life. Art, in his view, is a means of perfection and a means of salvation, whereas we ask of it diversion and æsthetic entertainment. Tolstoy, too, was greatly endowed with the typical characteristic of his race, temperament. This temperament estranges the Slav from us; he is more morbid, more excitable, more sanguine, more despondent, more passionate, more fatalistic, than ourselves. Moreover, Tolstoy's voice came as the most sonorous since Carlyle's, that has been raised against this civilization, of which America is the most successful and brilliant upholder. He has decried those things which we, as a nation, enjoy and believe in; he has set up standards which we declare impossible; he has preached a creed which we regard as chimerical; and he has advocated queer dreams and visions.

On the other hand, when we read Russian novels we say of the characters in the story, How like ourselves! And though the exclamation may have been provoked rather by the brilliant delineation of our common Arian humanity than by a real affinity with Russia, nevertheless there is some truth in it. Men of the two nations commonly find each other sympathetic. Being cosmopolitan, although of English speech, we have no barrier of racial patriotism to fence us off from the Slavs. In politics, too, we have always regarded

ssia as our friend, and we find a curious ·traction in the vague divination that Russia to be our great rival in world dominion, and entertain a wonder not unkind as to whether we shall mark out our boundaries as ·riends or enemies. Russia and America are e two young nations, and just as America is o young to have attended the great European school, so, also, Russia has been undisturbed by the great educational influences of European civilization, the Middle Age, the Renaissance, he Reformation. Our national horoscopes, if wisely cast, would probably reveal some kinhip hidden to sociology.

Tolstoy, all unconscious, subtly strikes this ord of sympathy, and constantly suggests this common absence of experience. And Americans have an illogical feeling that there is some point of resemblance between our ideals of democracy and Tolstoy's religious socialism. Industrial energy has driven us far afield, yet we cherish those ideals in our closets, and in Tolstoy we think we see the embodiment, not of the despotic, bureaucratic Russia, ut of the genius of a great people seeking uality and fraternity.

On the whole then, we may not be wrong thinking that our ears, more than the nglishman's, the German's or the Frenchman's, are attuned to the greatest voice that has ever spoken the Russian speech. Tolstoy is the master figure for Russia, as Shakespeare England, or Dante for Italy, a great deepowed Slav.

II

Tolstoy was born on the 28th of August, 8, in the heart of Russia, some 130 miles th of Moscow, the proper birthplace for a n destined to become the great spokesman he Slavic race to the world. His mother, sweet woman, died when he was three years ; his father died five or six years later. lstoy's elder brother, Nicholas, seems to ve succeeded to their place in his filial fections. Tolstoy was a sensitive, impressionble child, as is shown by the vividness with which certain scenes stamped themselves on his memory—an incident by his mother's coffin, a storm while driving, a Russian fakir. Even his boyhood he displayed a morbid attempt a philosophic understanding of life He s, "It appeared to me that happiness does depend on external causes but on our attitude toward them, that a person who can bear pain can never be unhappy. So, in order to get used to pain I would, for five minutes at a time, hold the dictionary in my outstretched hands, or beat myself on the bare back with a rope till tears involuntarily came to my eyes."

In youth, although he never lost his sense of duty, he seems to have received the ordinary education in vogue among the aristocracy, learned in part from French novels. "Thanks to these novels I formed new moral ideals which I wanted to attain. First of all I wanted in all my conduct to be noble, then to be passionate, and lastly—what I was inclined to even before—to be *comme il faut*. My *comme il faut* consisted, first and foremost, in speaking excellent French and especially in pronouncing it faultlessly. The second condition of *comme il faut* was to have long nails, clean and polished, the third, to be able to make a graceful bow, to dance and to carry on a conversation; the fourth, and very important, too, to be indifferent to everything, and to wear a constant expression of elegant, contemptuous weariness. The relation of boots to trousers of a man at once decided in my eyes his station in life."

After schooldays he went to the university at Kazan, where he probably studied more than he has said, for, after the manner of repentant spiritual natures who have awakened to a new meaning in life, all through the narrative of his youth, sketched rather than told in his books, he has magnified the evil that he did and the duties that he left undone. At the university the study of science and philosophy and the talk of the older students easily uprooted the religious teachings of the Orthodox Greek Church, which he had accepted as a child, and left him a vague theist.

After college he lived on his estates for a few years and then enlisted in the army, and on the outbreak of the Crimean war he was sent to Sebastopol, and given command of a battery. There he took part in the heroic defense conducted by Korniloff and Todleben with so much success until the storming of the Malakoff tower by the French forced the garrison to evacuate the city. It is interesting for us to reflect, that, while the Light Brigade was making its wild charge into "the mouth of Hell," the noblest and the most spiritual- soldier on either side was a young the Russian artillery. Tolstoy's ex-

perience at Sebastopol affected his whole life. There he saw the misery, the cruelty and the carnage of what has proved a useless war, and there acquired the belief that, to the Christian, war is nothing but ceremonious murder.

The war over, Tolstoy went to live in St. Petersburg, as a rich, fashionable and brilliant member of the polite world. There he quickly acquired distinction by the publication of his "Sebastopol Sketches," and lived with other young men of letters, indulging in the ordinary dissipation of men of fashion. He spent a year or two in travel, and seems to have mastered, with the Russian linguistic facility, English, French and German. In 1862, he married the daughter of an army surgeon. Their family life was always most happy, although she did not share all his radical opinions. They lived in the country on his estates, where he devoted himself to improving the condition of the peasantry. He had always been a reformer, and even before the Ukase of Emancipation, he had been the first nobleman to liberate his serfs. In these years he wrote "War and Peace" (1864-1869) and "Anna Karénina" (1876); but in spite of the brilliant success of these novels the religious bent of his mind began to overcome the artist in him. The questionings concerning the meaning of life, which before his marriage had almost driven him to suicide, came again. He found an answer to them in the gospel of Christ, and after that he turned his thoughts almost entirely to the best means of propagating his belief. His writings, after this, always speak with the voice of the preacher. "My Confession," "The Four Gospels," "My Religion," "What Must We Do Then?" "The Kreutzer Sonata," "The Kingdom of God is Within You," "What is Art?" and "Resurrection" followed during the next twenty years.

He had always been outspoken upon Society, upon the State, upon the Church, but gradually as he became more convinced that he had learned the truth, his criticisms became more severe and dogmatic. For example he wrote, "We see numberless administrators—the Sovereign, his brothers and uncles, ministers, judges and clergy—receiving enormous sums gathered from the people, and not even fulfilling those light duties undertaken in exchange for their remuneration. It appears then, that they steal their salaries, gathered from the people, and, therefore, the people's property—and yet it does not enter anyone's head to condemn them." Again, in "Resurrection," he divides convicts into classes, and says, "To the fourth class belonged those who were imprisoned only because they stood morally higher than the average level of society. Such were the Sectarians, the Poles, the Circassians, rebelling in order to regain their independence, the political prisoners, the Socialists and the strikers." And in "The Kingdom of God is Within You," he writes, "However strange the statement may appear, every Church, as a church, has always been and always must be, an institution not only foreign but absolutely hostile to the doctrine of Christ. It is not without reason that Voltaire called it "*l'infâme*"; it is not without reason that all so-called Sectarians believe the Church to be the Scarlet Woman prophesied by the Revelation; it is not without reason that the history of the Church is the history of cruelties and horrors. Between churches in the ecclesiastical sense and Christianity, not only is there nothing in common except the name, but they are two utterly contradictory and hostile elements. One is pride, violence, self-assertion, inertia and death. The other is meekness, repentance, submission, activity and life."

The Russian Government was prudent enough to let him alone, but the Holy Synod finally excommunicated him in 1901.

Of late years he has been an object of great veneration, especially to Americans and Englishmen, who used to make pilgrimages to see him, until his failing health prevented him from receiving them so freely.

III

There has always been a very great obstacle to the appreciation of Russian literature, in that it has only been known in translations, and often in translations of translations. All the charm, all the intimacy, all the interest which language gives is taken away, and we receive but an approximation of the thought. Sometimes the personality of the translator, or his whim, or his prudery, stands squarely between the reader and his author. In the preface to an English translation of "Anna Karénina," the translator says that, owing to the wide divergence between the conventions of the two countries, he has been obliged to skip, but for the greater part he has followed the original.

Naturally we know nothing of Russian poetry, for poetry, as Coleridge said, is "the best words arranged in the best order," and of Russian prose we are mainly confined to novels, as other translations are pecuniarily unprofitable. Twenty-five years ago hardly anybody knew more than the names of one or two Russian authors, when Turgenieff, Dostoyevsky and Tolstoy appeared, one after the other, as three novelists of the first rank, and the Western world began to understand that, in spite of British tradition to the contrary, the Russian had a soul. Of these three, notwithstanding the wonderful beauty and art of Turgenieff, Tolstoy stands first. "Anna Karénina" will probably rank as one of the greatest of novels, except in the estimation of those who give the palm to "War and Peace." Novelists—Flaubert, Meredith, Howells—as well as readers burst into a chorus of praise. The delineation of character and of passion, the incisiveness of individual scenes, the absence of exaggeration, the presence of the spirit of tragedy purifying the commonplaceness of life, make these novels at least the equal of the greatest English novels. Tolstoy has this advantage over the great English novelists, that, although he has not the humor of Dickens, nor the wit of Fielding or Thackeray, he has a quality they have not, which yet belongs to the great geniuses of the world, – passion united to intense seriousness. Tolstoy also was a greater man than any of the English novelists, and he was also a greater artist. The figure of Anna Karénina stands out with a tragic grace, with a vividness, with a personal relation to the reader that leaves it no superior out of Shakespeare. Tolstoy draws scenes as clear, as detailed, as brilliant as *genre* pictures of the old Dutch masters. giving them a larger interest, however, because the reader is always conscious that Tolstoy's picture is but a fragment of a larger life not represented. The effect is not obtained by heaping together details as Zola does. Tolstoy falls like the sunlight upon his subject, and the spot becomes brilliant with color. Such a scene is that where Oblonsky and Levine dine together in the beginning of "Anna Karénina." Oblonsky has let himself, as was his way, be led too easily into temptation, and being in a mess, he recounts the affair to the serious, high-minded Levine. Oblonsky, the sinner, while ordering the dinner, oysters and white seal, entrée, ragôut, portrays himself as Iago or Othello. And in the scenes between Anna and Wronsky one has an uncomfortable feeling of eavesdropping.

"Resurrection" and the "Kreutzer Sonata" are inferior inasmuch as novels written with a didactic purpose are necessarily inferior. Turgenieff's dying message to Tolstoy was, "Go back to literature, great writer of our Russian land." The purpose of doing good has a disconcerting effect on the mind of the novelist. The large morality of life, obvious only at rare times, has to be rudely distorted in order to point the moral.

A few years ago appeared the very interesting treatise "What is Art?" Most conventional opinions are rudely disregarded; he insists upon the importance of the subject matter, and assuming the brotherhood of man to be the cardinal fact of life, he judges a work of art according to the measure in which it helps to develop in us the consciousness of the obligations of that bond. Written by a common man the book would have passed as an ignorant and conceited confusion of art and ethics, but written by the greatest living artist it compelled attention. The world is not likely to accept its teachings any more than the world is likely to approve the rule "Resist not evil," but for those who find the interest of life centred in ethics, it comes with a persuasiveness rarely found except in the truth.

IV

Before he was fifty Tolstoy had dedicated his life to his religious ideals. He had then fully acquired his faith, and he girded himself to lead his people across the deserts of disbelief into the land of promise. It is in this aspect that his figure looms up as the embodiment of peasant humanity, as the incarnation of a humble people.

For many years he had been in quest of belief. In his childhood he had rendered lip-service to the Orthodox creed, but when he was grown up and looked backwards he discovered that this belief was but a fiction, that religion as professed by him and by people of his world had no real relation to living. Nevertheless he had a belief in the gradual perfectioning of all things and that there was *Something* behind the world of phenomena.

TOLSTOY AT 26

TOLSTOY IN 1876
Taken after a painting by Yareshenka

After leaving the university he found that his desire to be perfect, in bodily exercises, in conduct and in spiritual life, narrowed and shrunk into a desire to be rich and famous; and under the influence of his dissipated little world and of his aunt, who said that "To teach a man manners there is nothing like a

TOLSTOY IN 1857

COUNT TOLSTOY AT THE AGE OF 40

TOLSTOY, BY ILGA REPIN

liaison with a well-bred married woman," he rapidly drifted into a frame of mind wherein perfection lost all moral significance. This mental attitude lasted for a time. The sight of war in the Crimea, of an execution in Paris, where he saw "the head separate from the body and fall with a thud into the basket," the death of his brother Nicholas, were among the causes which aroused him to a sense of extreme dissatisfaction and induced him to go and live in the country, completely skeptical of the value of progress. There he was continually haunted by questionings concerning life—"Why am I alive?" "What is the meaning of life?" His riches, his social rank, his fame as an author, became worthless to him. He felt that he must find a meaning to life, otherwise he could not live; an unmeaning life was impossible. He cross-questioned men of science, philosophers, priests, everybody, crying "Why am I?" Science answered "In infinite space, in an infinity of time atoms, infinitely small, change and shift in an infinite complexity; when you understand the laws of these changes you will understand why you are alive." Philosophy answered "The world is something both infinite and incomprehensible. Human life is an incomprehensible part of this incomprehensible whole." All the other answers were likewise barren. He consulted the sages, Socrates, Schopenhauer, Solomon, Buddha; all answered "Life is vanity."

Discouragement prompted him to suicide, but there was some power stronger than himself which stayed his hand, and he looked about to see what other men did. He found his little world divided into four classes —the ignorant, who do not perceive that life has no meaning, the Epicureans, who eat and drink and reck not of the future, the brave and intelligent, who see that life is vain and commit suicide, and those like

SKETCHES BY PASTURNAK

himself, who see the universal vanity of things, but have not the resolution to kill themselves. But looking beyond his little social horizon he saw masses of men, millions of toiling peasants, who lived and found life full of meaning. Visiting them he found that they lived by faith. This faith was the old unreasonable Orthodox creed of his childhood, and he was confronted by a dilemma. The men of his world who exalted reason found life unreasonable, while the peasants, unreasoning and believing in an unreasonable creed, found it reasonable, and while he was impelled to suicide they lived by faith.

This peasant life he adopted. Starting in this way he built up a simple social phil-

osophy. He condemned most institutions in State, in Church and in Society, he blamed the teachings of science and of art, and he affirmed the Gospel text, "But I say unto you that ye resist not evil."

We expect a great mind viewing the world's misery, to propound a new doctrine of ethics, some simple plan of universal virtue, and when we find that it merely repeats the words of Jesus of Nazareth we say to ourselves that the steppes of Central Russia, like the fields of Judæa, are far, far away, and that Russian peasants, like the Hebrew fishermen, are not Yankee electricians or Western railroad men. But argue as we will, something keeps suggesting to our minds that behind this repetition and reaffirmation of the old Gospel stands not mere simplicity of life and the lack of what we call civilization, but the presence of truth. In spite of the brilliant excellence of his novels, Tolstoy's chief interest for us is the testimony which, in the midst of our industrial civilization, he bears to the truth of Christ's teaching.

TOLSTOY'S WORKROOM

THE MOSKAU HOME (Rear View)

CHINA AND EUROPE FACE TO FACE

THE LATE UPRISING THE FIRST RATHER THAN THE LAST CHAPTER IN AN INTERNATIONAL DRAMA — HOW RUSSIA HAS MANCHURIA FOREVER, AND GERMANY A POST OF VALUE FOR WAR AND TRADE — THE OPINIONS AND THE FEARS OF THE BEST STUDENTS OF ASIATIC EVENTS — JAPAN AS CHINA'S ALLY

BY

JULIAN RALPH

WE used to flatter ourselves that the future of China was an easy matter to grasp because she had no future. She possessed four hundred millions of souls, which our missionaries were to save, and an equal number of backs and stomachs, which our merchants were to clothe and feed. We imagined that whatever we were to accomplish must be gone about slowly. We fancied, too, because she had once had a civil war in which the loss of life exceeded any such loss on record, that China could put on a very warlike front; and in the back of every Western brain was a recollection of the Tartar invasion of Russia and a faint fear that if we roused China she might repeat that incursion and make us realize the "yellow peril." In this way, we imagined, we might give a future to a narcotized giant who would otherwise continue asleep into eternity.

The Japanese rushed in, woke and thrashed the torpid colossus. The Japanese have sharp wits, a restless nature and an immeasurable ambition. They do not possess the quality of responsibility because it cannot be gained by imitation or presumption. Therefore they were charged by destiny to bring about in ten years results for which Russia, for instance, had counted upon waiting indefinitely—for a century or centuries. Whatever had been the quality of the Tartars who conquered China, as well as invaded Europe, the Chinese have fought only to preserve their traditions and to defend their homes. They have been taught to regard warriors as the lowest of the four classes of citizens and war as a brutal and degrading practice. The Japanese knew this very well and equally well did they know that they could easily whip their victim. They were easily despoiled of the best of what they reaped from the war. Their only satisfaction must be found in the cheapness with which they acquired a military renown and in the sorry fact that they humiliated China and laid it open to the political machinations and commercial rapacity of the Christian Powers.

What ensued has brought Europe and China face to face. Whether China is, as Archibald Colquhoun calls her, "a derelict," whether she is to be hauled into the port of the strongest Power and kept for "salvage," or whether she is slowly gathering the shrewdest brains in Asia in order to repay with interest the terrible indignities she has endured —these are the turns of the dice which the future is to disclose.

Let us, in this brief historic glance, place events in their proper order and see what steps Europe has taken to rivet its present hold upon "the derelict." We will begin with Russia. Until very recently we had high and authoritative reasons for thinking that our Government at Washington believed that Russia meant to withdraw from Manchuria. Alas for England! her Government believed the same thing. Japan was, from the first, certain that Russia had no such intention. Germany had been influenced to cease opposing the Russian plans and she, too, knew that Russia meant to stay. So did France—who encouraged her—and I make bold to say so did Russia herself know that she had not the slightest intention to withdraw from Manchuria but, on the contrary, she hoped to reach farther south, to rule in Peking and to Russianize at least the northern half of China.

Mr. Colquhoun, in his recent paper in the

rning Post of London, says that it matters ry little what are the terms of the Russo-hinese convention; "the vital point is what ussia has actually done and is doing in Manchuria, not what she professes or promises." No one will belittle the value of this writer's opinions or the accuracy of his statements. If anyone were to do so it may be stated that all the English-speaking correspondents and others who have visited Manchuria recently confirm his statements of fact and agree with his inferences. I will not puzzle the lay reader with too many unfamiliar Chinese names, but I will say only that Russia agrees o hand back to China the three Manchurian rovinces within the next three years—but ubject to the concessions already obtained nere. The Manchurian and even the Shanhai-kwan railroads are to be surrendered—but "Russia is to be relied upon exclusively to protect the line." As for the Chinese military forces in Manchuria, China is to employ Russians exclusively to drill and to discipline her troops, who are to be nominally commanded by a Tartar general.

It may be that England and the United ates are to be hoodwinked by such a contion, but who else can be—in the name of mmon sanity? Already the railway men no are acting as guards in Manchuria are icked troops—and there are 30,000 of them ith stone buildings as posts or garrisons, hteen miles apart, all along the lines. In the larger towns depots have been estabned for their supplies of food, raiment, arms d ammunition. When the self-evident solery have been withdrawn these 30,000 cked soldiers will remain—twenty to the le—to guard the 1,500 miles of railroads. nd the Russian officers will drill the Chinese diers into such a force as England's Sikhs England's Egyptian soldiery. I say that s will be the outcome of the Russian comnd of the Chinese force, because to argue herwise would be to argue Russia an idiot tion.

Furthermore, the convention declares that mining and commercial rights and priviges are exclusively reserved to Russia. Already business has begun in all the mining entres and Russian firms and syndicates are oing the work and providing the money. If here ever was an "open door" in this new lation of China to Europe it looks as if Russia had stepped quickly through and banged it shut. Indeed, such is the absolute fact so far as Manchuria is concerned.

"The first step of the military in occupying the country," says Mr. Colquhoun—and we have heard the same facts from a dozen others who wrote from China during the siege of Peking—"was either to square or crush the leading officials. Such as were amenable were placated with presents and retained in office; some even paid visits to St. Petersburg, where they were most graciously received. Those who did not fall in with Russian views were removed at once without any regard to efficiency. The savage tactics pursued during the earlier portion of the campaign in Manchuria—of which the Blagovestchensk massacre was but a single example—was followed by a period during which the lavish expenditure on public works, railways, buildings, roads and bridges, employing some 50,000 Chinese, restored prosperity to the country, but a prosperity, be it noted, which had its rise in Russian sources. It is not surprising in these circumstances that the people became reconciled to their conquerors and appreciated the advantages they were reaping in increased wages, plentiful work and safety from the banditti."

It is idle, considering the temper of the age, to spend any time or logic upon the moral aspects of what Russia has done. The leading Christian nations all rushed to China together, anxious that not any one of them—except the United States, which looked for no loot of either land or power or bric-à-brac—should get the better of the other. Russia alone has succeeded upon a grand scale. We have withdrawn from the scene. England never knew exactly what she wanted, and was handicapped by the Boer war to such an extent that she has even seen what she considered her natural zone of influence cut up and divided among her rivals. France, without any gift for colonizing, has extended her territory northward into the former zone of British influence, in a potential way, by means of railroad and other concessions wrested from China. Germany has come out second best. She and Russia have, alone, made great gains. And Germany's gains are as to Russia's rather like those of a camp follower behind an army than like a conqueror by herself. She has formed valuable c mercial outposts and connections in al erian and Manchurian centres in ord p a share of whatever Russia does

rectly for herself she has built an impressive commercial post and naval base in Kiao-Chau Bay, with railroads tapping the interior and subsidized steamers plying between there and her home ports. Whether she succeeds in a large way or not, she has shown great earnestness in her desire to reap all that is possible from Russia's invasion of China besides what she can get by her own direct efforts in her own newly acquired territory.

Mr. Whigham, the American war correspondent, now in China for an English newspaper, is the last man who has visited and described what Germany and Russia are doing in China. He compares Dalny, the Russian base (it used to be called Talien-wan), with Tsing-tao, the new German port, and says that in both cases large deep-water basins are being built at enormous cost in places not particularly well adapted for the purpose. In both cases the outlay is preliminary to a trade which does not yet exist. The main difference—and it seems to me a very important one—is that the Russian port of Dalny is the Eastern terminus of a gigantic railroad and military scheme, whereas Tsing-tao is the mother of a small railroad venture into Shan-tung, the country thus tapped being expected to feed the German port with business.

Dalny must become an important seaport the moment the Russian railway is completed, but it is by no means so easy to predict the future of the German port, Tsing-tao, because the hinterland of the latter place is poor as compared with the wealth of Manchuria's resources. However, the Germans needed a rallying point for all things German in the East, for commerce and for war; and this place on Kiao-chau Bay was the best and almost the only one available. She has already spent $30,000,000 there, and must spend $20,000,000 in making a harbor and fortifying it. Already one sees there many large Government buildings, two fine hotels and many business houses and dwellings.

The first sight of the place is described as astounding. It has the best hotel in all the Orient, except the Astor House Hotel in Shanghai, which, by the way, was built by a Hudson River Dutchman named Jansen. Its public and business buildings are more costly and substantial than any that are to be found in Shanghai or Hong Kong. The only retail shops are in an adjoining Chinese ward or settlement called Ta-pu-tao. The Chinese are flocking there and building the place with feverish haste—for the Chinese thoroughly believe in the success of the German experiment. The old authorities in China stoutly asserted that the Chinese would never build or trade in either the German or Russian ports, but the Chinese have shown them to be wrong. Two miles from Tsing-tao the Germans have constructed a model Chinese village for the housing of all the coolies employed in and about the new port. Though the coolies are thus obliged to live cleanly, with plenty of elbow-room, they are content to forsake their old ways, and the Germans are getting a good rental from each cottage.

The Germans are building a railway to Tsinau, the capital of Shan-tung. And they are following the Russian method in "guarding" the line with troops! They have now got 2,500 soldiers there, and new regiments are coming from home. Are these soldiers genuine railroad guards, or will Shan-tung soon become a German province as Manchuria has already practically become Russian?

Those Europeans who have been left empty-handed are fond of including the United States in the small list of gainers by the convulsion in China, because we have taken the Philippine Islands and are thus possessed of a naval and trading base close to China. As a naval base Manila is certainly of great use, or would be if we had trade interests on the mainland, but as a commercial headquarters it seems to me that our part is rather like a carriage block in front of the door than a pass-key to the door itself. And, like England, we have such immediate and pressing need of our troops where they are that we could not make an instant demonstration on the mainland with any considerable force. Shanghai—the little municipal republic managed by ourselves and France and England—is our vantage point for commerce and commands the "garden of China," the valley of the Yang-tse—that most opulent region which under our methods of civilization could easily have been held by England and made free to the traders of the world, but which is now the seat of activity in railroad building and mining by French and Belgian capitalists.

This is the situation of Europe in China today. The question is, What will China do about it? Since the Allied Powers do not

ee upon what they would have China be or
, it is for her to decide, provided Russia allows her to act, or provided that the other Western nations dare to force Russia to keep her promises and to cease her course of conquest and absorption in that empire. Germany, as we can already see, may be relied upon not to interfere with Russia. Whether she will assist Russia (and herself) by the use of her armed forces is another matter. The withdrawal of troops from Peking in response to the demands of the Germans at home, the failure of the German people to welcome General Waldersee on his return, the ridiculous ending of the effort to extort an apology r Baron Ketteler's murder from China—all iese are signs of the unwillingness of an already overtaxed and unprosperous people to submit to any considerable financial burden for the gratification of their Emperor's ambitions as a colonist and trader in the far East.

France will back Russia to the limit of her strength and enthusiasm. There our powers of prophecy end for we do not know what a iew Government in England will do at the ose of the Boer war and we can only feebly pe that our American statesmen will some ay break the trance into which they have been nrown by the hypnotic influence of the shrewd men whom Russia always sends to further her interests at Washington.

But what will China do or try to do and iat will be her next mood? George Lynch, his "War of the Civilizations" says:

"We have violated their temples and shrines; e have outraged their women, driving them to icide; we have sent marauding expeditions oughout the land encircling Peking and finally have imposed the overpowering burden of inmnity, not alone on the actual offenders but on e whole of the law-abiding population, who had othing to do with the outrages on foreigners."

"I do not think China will ever become an gressive power," he says. "But it is quite apable of becoming as effectually defensive as is Japan. It has more reasons for becoming a self-contained and defensive power than Japan because it contains within itself everything necessary to the intellectual as well as the physical life of the people."

He thinks that what Japan has done on a mall scale China will do on an enormously rger one.

Dr. W. A. P. Martin, President of the Chinese Imperial University, invests his entire book, the "Lore of Cathay," with the spirit of one who believes, and says, that China is not a derelict but a land with a living people capable of regeneration. He saw the present Emperor set his nation's feet solidly upon the high road toward modern progress when suddenly the Empress Dowager, fearing lest her power should be stripped from her, countermanded all that he had done and in her detestation of foreign ways went to the extreme of fanning the Boxer outbreak into flames. "But," says Dr. Martin, "so far from extinguishing the reform movement inaugurated by the Emperor, the effect of the convulsion will be to wake it into fresh activity. The Chinese people may be expected to welcome new ideas with more eagerness than ever before."

Dr. Arthur H. Smith, in his "China in Convulsion," declares that an unique opportunity for aiding in the rehabilitating of China was lost when our Western nations failed to comprehend and assist the reform movement of the Emperor. Dr. Smith holds that steamships, railroads, telegraphs and mines were not the means by which contact with Europe was to regenerate China. These appliances of "funded civilization" helped to bring about the convulsion. They had no tendency toward remedying the evils by which China was beset. He relies upon education and Christianity—the latter to be introduced by reformed missionary methods—to do the work of regeneration.

I think I am right in saying that all these authorities look for a renewal of anti-foreign demonstrations. I know that I am correct in saying that all these authorities—and every man I have met who knows the East—agree that the Chinaman is capable of higher intellectual achievements and a more substantial, enduring civilization than the Japanese, once he is awakened. It appears that the awakening is now rapidly progressing. The Empress Dowager remains to stem the tide, it is true, but the able right hand which executed her cunning projects in the past died with the death of Li Hung Chang. She and her Manchu nobles may sell Northern China to Russia, outright if the English and Japanese, in their new alliance, do not prevent it. these rulers are but conquerors and for

ers and care for nothing in China but their power and their pockets. Even then it may chance that the great bulk of the Chinese (already familiar with the plans of a host of patriots who wish to throw off the Manchu yoke) may rouse themselves and wage such a war upon the foreigners on their soil, as will in dread reality "stagger humanity."

If the unprincipled Empress, on the other hand, still desires to annihilate the "foreign devils" and if she hopes to free herself of debt to Russia by including the Russians in the victims of the next uprising, we are supplied with signs that her subjects are preparing to lend willing ears to such proposals. It was George Lynch who first pointed out that the demand for an indemnity to be raised by the whole populace was a grave injustice. Today, Mr H. J. Whigham, commenting upon his experience on a journey along the flooded Yang-tse Valley, says: "If anything at all could goad the harmless, peace-loving villagers of the Yang-tse to anti-foreign fury it is the imposing of indemnity taxes at the present moment."

Finally, we note that every week makes more and more clear the fact that Japan is to be reckoned as China's ally in the future. She believes that as none but herself among civilized powers can understand the Chinese, the care of China is her natural heritage. She has worked almost against hope for at least the moral support of this country in gaining some measure of justice toward China and in putting some brake upon the rapacity of Russia. Very recently she has sounded all the Powers with a view to addressing another protest to Russia. She expected no aid from France or Germany but was amazed to find Great Britain dumb in spite of her arch enemy's gains where England has only scored losses; she was pained at discovering that our country, which had behaved with such honor and dignity, did not see fit to bestir itself as Japan would like to have it.

At last, under the new administration of Britain's foreign interests by Lord Lansdowne, the Japanese have been rewarded with the partnership of Great Britain in an effort to right the gravest wrong that Europe has done in China. The two Powers will insist that the Powers keep their promise not to seize Chinese territory or extort concessions giving any Power or Powers an unfair commercial advantage over the others. The policy of Japan in which she seeks the support of England is laid bare in her demand that China promote to a place in the Peking Foreign Office the notorious Boxer Na Tung who went to Tokio to apologize for China's misdeeds. From this hour on we may count upon Japan as the hearty friend of China and we may be certain that her hatred of Russia no longer slumbers.

RESULTS OF THE PAN-AMERICAN CONGRESS

ARBITRATION, COMMERCIAL UNIFORMITY, THE PAN-AMERICAN BUREAU, AND PREPARATION FOR STILL MORE DEFINITE RESULTS BY SPECIAL COMMITTEES

BY

OSCAR K. DAVIS

SPECIAL CORRESPONDENT AT THE CONGRESS IN MEXICO

THE subject that occupied the chief attention of the Pan-American Conference, which was in session for more than three months in the city of Mexico, was arbitration. Closely akin to this was the establishment of an international tribunal of equity for the settlement of claims of citizens of one country against the Government of another. Less intimately connected, was the proposition to attempt the codification of international law, as well as the project for a general treaty of extradition. There were several commercial propositions also, which seem likely to be among the most substantial results of

the three months' deliberations. They embraced the work of the committees on Commerce and Reciprocity, Resources and Statistics, Water Transportation, International Railway, International Bank, Reorganization of the Bureau of American Republics, and some other allied matters. Other subjects taken up were the plan to secure international action on sanitation, an international copyright, and last but by no means least, a declaration regarding the construction of an inter-oceanic canal by the United States.

The most important result was the action regarding arbitration. An agreement was reached for the adhesion to The Hague conventions of the American republics not signatory to those treaties, through the negotiation of the United States of Mexico and America. There was a supplementary agreement, signed by ten of the delegations to the Conference, which provided for the compulsory arbitration of pending and future questions. Mr. Buchanan, the member of the United States delegation who represented us on the committee on arbitration, and to whose skill and ingenuity it was due that the conference reached any agreement on that subject, has expressed his belief that the agreement for adhesion to The Hague convention was, a thousand to one, the most important work of the conference.

To the average American it will appear that all the achievements of the Conference are valuable in proportion as they make for the betterment of our commercial relations with the other countries of this hemisphere. It is exactly on this point that the agreement on arbitration has value. If in itself it does not prove a good agent for the maintenance of peace between the somewhat unsteady republics of South America, it provides an excellent means to us for to make an offer of our good offices, insistently, if need be.

The Hague convention is the most advanced step that has been taken in all the world to avoid wars. It may yet prove of great value in the troubled Old World as an aid to diplomacy in the settlement of minor troubles, which, if permitted to go on, might lead to conflict, and in the New World, it will undoubtedly offer to the two nations most concerned in the maintenance of peace (Mexico and the United States) an excellent opportunity for the somewhat emphatic offer of mediation.

So closely allied to arbitration is the establishment of a tribunal of equity that it probably will be ranked next in importance. The scheme is merely tentative. It is not elaborate and does not involve the creation of an American court, but it contemplates the reference of all claims which the courts and the diplomats have been unable to settle to The Hague tribunal. Special courts for special cases may be created as the parties to the controversy may desire, or in case either nation is not a signatory of The Hague convention. It is not believed that all the American Republics will gain admission to The Hague tribunal as a result of the Mexico conference. Any case will be met, however, by this arrangement for the court of claims, since The Hague convention provides that its tribunal may be used by non-signatory powers. This agreement is for only five years.

A unanimous agreement was reached for the appointment of a commission of internationally famous jurists to prepare a code of international law which will be submitted to the next Conference, if in the meantime it has not been adopted by the different nations.

A recommendation which had the unanimous approval of the Conference provides for the calling of a special congress of tariff and customs experts to meet in New York within one year. It will investigate and report upon the feasibility of securing uniformity in the regulations for the entry, despatch and clearance of vessels, and uniformity and simplicity in all custom house formalities, and in regulations governing the passage of goods merely in transit through one country to another. This congress will consider the compilation of an authoritative dictionary of commercial nomenclature, printed in English, Spanish, French and Portuguese. It will give the commercial and local name of every article of commerce in the Americas, and it is expected that it will become the basis for statistical data of exports and imports, and be adopted in the tariffs and customs laws of the American republics. This will be a work of the greatest commercial value. It is the amplification of the idea presented to the Washington conference eleven years ago by Dr. Roméro, the Mexican minister at Washington. The congress will be asked also to consider the adoption of a common maritime and administrative nomenclature to be used in custom-house documents.

The great advantages to commercial interests throughout the western world that may be attained by the successful performance of the labors of this special congress need no demonstration. One other thing was done by the Conference which goes hand in hand with this in its potentiality of benefit to commerce. That was the reorganization of the Bureau of American Republics. Under the new arrangement the Bureau will become the great clearing house for official information, a common executive office maintained by all the republics for the dissemination of knowledge about themselves. The Conference provided for the transmission to the Bureau by each Government of all its public documents and statistical information, and the Bureau is required to keep this information collated and in such shape that it can be useful to any one who desires it. Another recommendation was that all the Governments see that their exhibits at the Philadelphia Commercial Museum are maintained.

To some of the delegates the project of greatest attraction was that which looked to the completion of what has been called the Pan-American railway. This never failed to arouse general enthusiasm, although it was not contended that there would ever be any great through-traffic on such a road. But the discussion will help towards the construction of the links that may ultimately be connected into one great system. The chairman of this committee was ex-Senator Henry G. Davis, of West Virginia, who will have headquarters in Washington, and whose business it will be to press the completion of the road.

These are the most important measures passed by the Conference. In addition there was a recommendation that an international bank be established in New York or some other great commercial centre, with branches in the most important cities of each country, which should make a specialty of the business growing out of the increasing commerce of the republics, so that there might be avoided the present vexatious system which involves doing business through European houses. The Conference also passed a resolution looking toward securing uniformity of patent laws, and a common usage with regard to trademarks and general recognition of them.

In general it will be seen that this Conference was much less confident of its own ability to settle difficult problems out of hand than was the first. It was more inclined to commit special propositions to special expert congresses to be called hereafter. It was less radical in the action which it took on arbitration. All this is good. There is greater hope that some of its projects will be ratified by a working number of the Governments represented in Mexico. The first Conference failed to secure the ratification of a single project of importance. It is greatly to be hoped that at least some of the commercial plans of this Conference will be approved, and it will be a great surprise if there is not a fairly general acceptance of its work on arbitration.

MR. HUGH H. HANNA

WHO "HAS SET UP A NEW STANDARD OF UNSELFISH PUBLIC SERVICE"

THE man who made it his business to fight for the gold standard until it became securely clinched, who by his single energy made the Indianapolis Monetary Convention succeed, has been called "the hero of a great financial victory." He is Mr. Hugh H. Hanna. The brevet was awarded by Mr. William E. Dodge the night the New York Chamber of Commerce presented Mr. Hanna with a well-earned gold medal for his work. Later, ex-President Benjamin Harrison said of him, "He has created a new standard of unselfish public service." Few men have had so keen a sense of duty to the community, and fewer the pluck to accomplish such a national task as Mr. Hanna performed in marshaling the power of the Monetary Convention and directing it in the work it did so well.

He was born in 1848, at La Fayette, Ind., where his father, Joseph S. Hanna, was a banker. Leaving Wabash College at Crawfordsville in his sophomore year, and going

abroad, he studied for some time in Stuttgart and Wurtemberg. He was a great traveler in his younger days, partly from choice, and partly forced by ill health. In 1873, he married Miss Anna Sharpe of Indianapolis, daughter of the late Thomas H. Sharpe, a banker, and one of the early settlers of the town. Seven years later he bought an interest in the Atlas Engine Works of Indianapolis, one of the largest establishments of its kind in the country, of which he later became the active head and sole proprietor.

Mr. Hanna's whole life has been a useful one, and of late years his public spirit has manifested itself in national affairs. Never seeking office, he has shown what could be accomplished by a patriotic citizen who was willing to put aside ambition, and to sacrifice himself and his time and money for the welfare of the public. The city of Indianapolis has felt his influence for good in many ways. His readiness to help in all good causes, and his deep interest in whatever concerned the well-being—whether spiritual or material—of the community, have long been recognized by his townsmen, and there is no one who stands higher in their regard.

Mr. Hanna had much to do with the organization of the charities of Indianapolis, and for many years he took an active part in the administration. The Art Association, too, owes much to him, and any movement looking to the beautification of the city has found him to be a warm friend and supporter. Gradually his influence spread abroad, and in the Republican State convention of 1896 he was an earnest advocate of a frank and honest declaration in favor of sound money. In those distressful days the country was listening with profound anxiety for word from the States of the Middle West, particularly Indiana, which was then, as it had been for years, a pivotal State. In many parts of the country little was expected. Indiana was chiefly known because of the widespread prevalence of the greenback heresy in earlier days, and it was doubted whether the Republicans would have the courage to speak the needed word. Worse yet, only a few years before this, a Republican State convention had commended the Sherman silver purchase act as a long yet prudent step in the direction of free-silver coinage. But Mr. Hanna and his friends won their fight, and the convention of 1896 said:

"We favor the use of silver as currency, but to the extent only and under such regulations that its parity with gold can be maintained, and in consequence are opposed to the free, unlimited and independent coinage of silver at a ratio of 16 to 1."

It was a great victory, with a moral effect that can hardly be overestimated. The National Republican convention, that met at St. Louis soon afterwards, was much influenced by the Indiana declaration, and the influence of the Indiana men had much to do with strengthening it in its declaration for gold. Mr. Hanna was active throughout the campaign. He was glad to recognize any men as allies who were willing to help in the fight against free silver, no matter what might be their views on other questions. Unlike some of his Republican friends, he saw that there was but one issue—the financial—and he bent all his energies to secure the right verdict on that.

But he also recognized that the election did not of itself settle anything. The Republican victory was nothing more than a commission or mandate to the party to carry through the work of financial reform. Out of the agitation, in which Mr. Hanna bore a leading part, came the call of the Indianapolis Board of Trade, issued shortly after the election, summoning a conference of the commercial bodies of the Middle West to consider the policy to be pursued. This conference called a convention of the commercial organizations throughout the country, which met at Indianapolis in January, 1897. It was a notable gathering, and its deliberations led to important consequences. Of course it declared for the gold standard, and outlined a scheme of monetary reform. It asked Congress to appoint a commission to deal with the great question, and make a report for the guidance of Congress.

Feeling, however, that Congress might refuse to act, the convention constituted an executive committee of fifteen members, with Mr. Hanna at its head, which was to appoint a commission to do the work in case Congress should fail to act. The appointment of this commission devolved on Mr. Hanna, and great wisdom and tact were shown by him in the choice of its members. It devoted much time to the consideration of the subject in all its details, and presented its report, together

with a bill for a currency system, to the convention which reassembled at Indianapolis in January, 1898, under the presidency of Governor Shaw of Iowa, now Secretary of the Treasury. The report was adopted by the convention, and was widely distributed throughout the country. The fight was kept up till the free silver majority in the Senate was overthrown, and committees of both Houses had agreed on a measure embodying the main principles advocated by the monetary commission. In this struggle Mr. Hanna was a leading figure. He spent much time in Washington, and used his personal influence with President McKinley and with Congress to secure favorable action.

And his services have been generously acknowledged. In April, 1900, he was elected an honorary member of the New York Chamber of Commerce, which gave a dinner in his honor. On that occasion a gold medal was presented to him. One of the speakers was Mr. William E. Dodge of New York, who said:

"I really think that we have no military or naval hero who has carried on a battle more wisely, with more genius, with more true stratagem than he has, and he has been so honest about it, so kind and so true, everybody in Washington knew him, everybody loved him. Several gentlemen there told me he had more influence than any other man in the Capitol, because he had absolutely no selfish motive behind him. I hope and believe that Mr. Hanna's name will go down to posterity as the hero of a great financial victory. And, as I said, when the resolutions were introduced the other day at a meeting of the Chamber, I feel that since the time of Alexander Hamilton we have had no man who has done more for the industrial and financial and commercial interests of this country than Mr. Hanna has done. We are honoring ourselves in honoring him, and those of us who have been associated with him have not only admired his genius, his high character and his unselfish patriotism, but we have learned to love him as a true man. And as long as America produces such men as Mr. Hanna, and those who have been associated with him, we need have no fear for our country."

A few days before this Mr. Hanna was the guest of honor at a dinner in Indianapolis. The late Benjamin Harrison presided, and many of the leading citizens, Mr. Hanna's friends and neighbors, were present. The recognition of his services to the country was generous and enthusiastic. Mr. Harrison said:

"Here in our beloved city three years ago a movement was inaugurated having for its central purpose the definite establishment by law of the single gold standard as the basis of our currency. That movement spreading from this centre and supported by the great commercial bodies of the United States, has won a notable and lasting triumph . . . In the good work done by these great commercial forces one of our fellow-citizens has been the director-general. It is not very hard to get up a convention and to make resolves. There is the enthusiasm of numbers, a tide that is high and buoyant; but when the hall is again deserted, and public interest ebbs, if there is not left in charge a man who can fight waves as well as ride them, who has the gift of wise persistence, it were almost better the convention had not assembled. Why do reforms so halt, even when they have a high initial velocity? Because the gun is not recharged and pointed to strike where the first shot splintered the wall, behind which evil sits in security. The gun must be kept hot and the aim single. Wanted—A strong, trained man, who has made a success of his own business, who will quit it and bring to reform work the energy and wisdom he has used in his own affairs, without compensation. We had better mark that advertisement 'till forbidden,' for there will be no rush for the place. The Indianapolis Monetary Convention, by a rare stroke of good fortune, found a man like that, as the song goes, 'the very first time.' Our friend and neighbor, Mr. Hugh H. Hanna, has done a very noble and a very notable work. He has set up a new standard of unselfish public service, and we are here to express our appreciation of it."

As further evidence of the appreciation in which his services were held, Harvard University conferred on Mr. Hanna the degree of M.A., and Wabash College gave him the degree of LL.D. Mr. Hanna still continues to find time from his large and absorbing business to work for the public good. He is a trustee of the Tuskegee Normal and Industrial Institute, in which he is deeply interested, and he is a member of the Southern Education Board. Thus he has been a potent force in the life of the city, State and nation, and his influence for good has steadily grown as men have come more and more to appreciate his ability, his earnestness and his entire disinterestedness.

AN IRRIGATED HOME YARD
Fresno, California

THE TRANSFORMATION OF THE DESERT

HOW IT HAS BEEN CHANGED BY MODERN METHODS AND THE ENERGY OF THE MINER AND THE RAILROAD BUILDER — A STORY OF NATURAL WONDERS AND OF INDUSTRIAL GENIUS—THE OLD DESERT AND THE NEW

BY

ROBERT T. HILL

OF THE UNITED STATES GEOLOGICAL SURVEY

BEFORE the railways came, the Great American Desert was a most primitive region. In 1880 it was inhabited by a population about as dense as that of the Sahara now, but practically in the same state of culture; and the mission bells rang over the same civilization that existed in 1528. The inhabitants practised irrigation, agriculture and architecture very much like that of the Egyptians of today, and constructed dwellings of unburnt brick and stone. The aborigine found sustenance on the desert, but of a kind upon which the white man could not well exist. Maize was his staple of diet. This with the tunas (fruit of the prickly pear) and the roots of various yuccaceous plants, supplemented by a few wild animals, provided an aboriginal diet pure and simple.

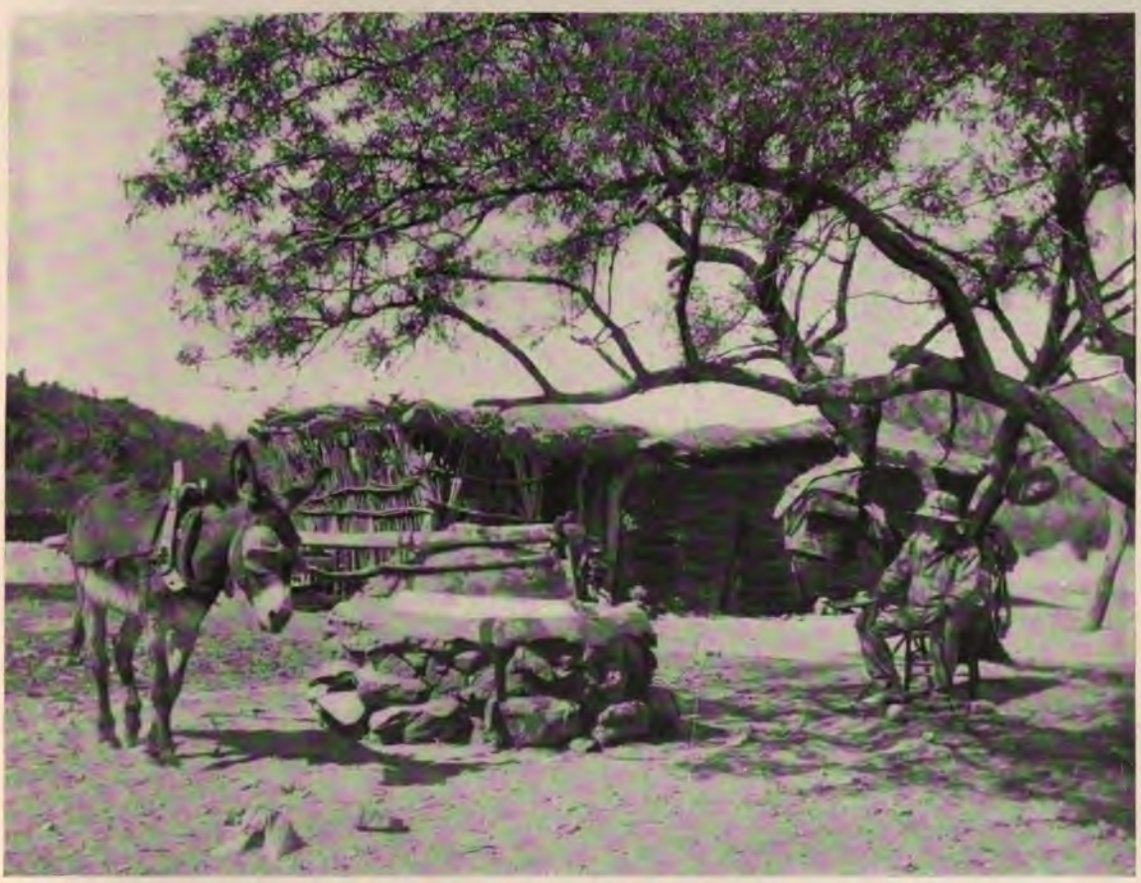
It was no great feat for the Spaniard who already possessed an Old-World knowledge of desert craft to amalgamate with the aborigines. He gave to them a few domestic animals (the goat and the burro, which can live where other animals starve). He also gave to them the Catholic religion and the Spanish language. For nearly four hundred years the desert population made no progress in industrial civilization beyond adopting the wooden plough and the cumbersome wheeled cart known as the *carretta*.

In Mexico the old desert cities and country estates were practically in the same status of civilization that existed in the first century

IN THE VALLEY OF TOLUCA

after discovery. The cities had no commerce except by caravan; the estates were great feudal districts with their fortified *haciendas*, to which all the surrounding people were attached as fiefs. For two hundred miles along either side of the international border in Mexico and our own desert country the unconquered Apache spread devastation from the Pecos to the Colorado; and the only white men there were the soldiers at scattered and lonely outposts, or "bad men" endeavoring to hide from civilization, and hardly better than the Apaches in instincts or action. Here and there in the United States at the widely dispersed water holes were a few nomadic ranchmen who owned cattle of primitive breed for which there were no purchasers, except the army and beef contractors. Some mines there were also, but these were merely those with easily reducible ores and limited in depth by the distance which a man could dig in solid rock without machines or powder, and from which burdens could be carried on the human back. In Utah alone had the white man attained a foothold, but the Mormons were men who sought the desert to escape civilization, with the ambition of reverting to a culture as purely barbaric as that of Abraham and his descendants who now live in the Sahara.

With the advent of the railroads the modern conquest of the desert began. It was first awakened from its centuries of lethargy by the whistle of the locomotive in the eighties. In the Great American Desert in the United States and Mexico there are now more than 9,000 miles of railway.



A FLOUR MILL IN THE DESERT SONORA

No imaginary achievement of Aladdin's could approach the marvelous transformation which has thus been produced. But for the railroad the Great American Desert would today be as unproductive as the Sahara, and

Loaned by Dr. W. J. McGee Photographed by Wm. J. Dinwiddie

PRIMITIVE SPANISH AGRICULTURE
In the Desert Sonora

still populated, like the Sahara, by people who exist without division of labor, the use of mechanical appliances or extra-territorial commerce. The "hay-burning locomotive," as the burro of the Mexican is now facetiously called, would still be the chief motive power, and the nomadic Indian would still be murdering all would-be settlers.

The first railways to be constructed were designed merely as highways between the Atlantic and Pacific seaboards. No thought of revenue from the desert itself was anticipated. Next came a great longitudinal line following the ancient trails of the Aztec from Mexico to Santa Fé. Mining and population soon followed these trunk lines, which are now extending out even into the utmost recesses of the desert, and these feeders—built or in process of construction—will soon equal the aggregate of mileage of the original trunk lines. From the Pecos in Texas to California, a distance of 1,500 miles, the route of the Southern Pacific followed a belt of country devoid of water except occasionally in the Rio Grande. Not a herd of cattle, a modern house, a farm or a mine existed along this desert stretch. Nor would they exist today had it not been for the construction of this railway. Now its course is marked by many prosperous embryo cities and villages.

AN OLD-TIME ARIZONA HOME

Notwithstanding the apparent scarcity of water, one of the most remarkable features of the American Desert is that water has been secured, often in apparently impossible places, and in quantities which have made possible the existence of cities and industries. Like the deserts of the Sahara and Asia, those of

America have a supply of underground water; there is hardly a desert in which the experiment has been tried where waters have not been found within 2,000 feet of the surface. Though not often sufficient for agriculture, enough has usually been found to afford a supply for cattle, railroads and mines.

Underground water has usually first been found by the railway companies. When the track was first pushed across the desert water was brought from the rear in tank cars; but when the track was completed water was bored for in the desert itself. The engineers have had at command a mechanical appliance second only in importance to the locomotive, and one which in the desert usually goes side by side with it. This is the mechanical drill. At great expense they bored in many places. The existence of underground water beneath any particular area having once been demonstrated by the railroad company, individuals, of course, usually repeated the experiment. Three notable triumphs of the mechanical drill over nature are the flowing wells of the Salton Desert, the flowing well at Benson and a supply of 700,000 gallons a day from the deep wells on the Mesa at El Paso. Each of these supplies of water was obtained from localities which superficially were hopelessly dry.

A MODERN ARIZONA HOME

The man of the desert is also masterful in the art of obtaining, conserving and utilizing water. The canteen and water barrel are inseparable companions in exploration. Large mining camps are often made with only so much water as can be brought by burro pack trains. Hoists and other machinery are often run by gasoline engines to save the

MODERN AMERICAN AGRICULTURE IN THE DESERT SONORA

necessity of water for boilers. In many places water is sold by the gallon, and numerous instances are known where men make their living from wells. The desert beast is used to little water. Teams can usually obtain but one drink a day while upon the road. Where the gophers, the rabbits and the coyotes, which inhabit the waterless stretches, obtain their moisture is a problem which as yet baffles the scientific inquirer. Certain cattle which are known to inhabit a waterless region in Western Texas are said to obtain water from the stalks of the yucca and the sotol.

Several of the largest mines in the desert depend almost entirely upon the water transported on cars. The Copper Queen runs its vast smelters and machinery chiefly by water thus obtained, while the famous Sierra Mojada, of Coahuila, with its population of 5,000 people, has not a drop of water except that brought in tanks a distance of one hundred and twenty-five miles. Yet these two mines annually return millions of profit.

But the sterile and hopeless-looking soil of the desert, when artificially watered, is apparently more fertile than that region where rainfall is abundant. There is no nobler spectacle than a dreary waste converted into an emerald oasis by water artificially applied, and in the desert may be seen some of the most profitable and skilful agriculture in the world. The wheat fields of Utah and Sonora, the great cotton farms of Coahuila, the alfalfa valleys of the Rio Grande and the orchards of California are all inspiriting examples. The transformation made in the desert where irrigation has been possible is marvelous, and in one instance—in Southern California—has resulted in the development of communities of great wealth and culture, where the ideals of perfect conditions for existence are as nearly attained as possible.

Photographed by Dr. James Douglas

A MINING RAILROAD
Morenci, Arizona

A word of caution must be written, how-

A DESERT MINING CAMP

Morenci, Arizona

TRANSPORTATION ON THE DESERT TWENTY YEARS AGO

ever, against an overestimate of the agricultural capacities of the desert. It is necessary artificially to collect the precipitation over large areas, and to concentrate it upon smaller areas by impounds and canals. In this manner at least twenty-five acres must be set aside as unproductive catchment areas for every one that may be cultivated. All rain water that falls upon the desert or upon its neighboring mountain, if it could be protected and carefully preserved, would not irrigate five per cent. of the great desert area. The efficiency of the rain of the Great Desert region for agricultural purposes is still further diminished owing to the season in which it falls—June to October—too late for the growing crops, the planting and growing months of spring and early summer being dry. From a practical standpoint it is doubtful if even one per cent. of the vast area can ever be profitably tilled by irrigation. The underground water supply, too, is entirely insufficient for extensive agricultural uses, even when it is free from injurious salts; and the desert people, after every possible experiment, have long since ceased to anticipate any material supply for irrigation from this source.

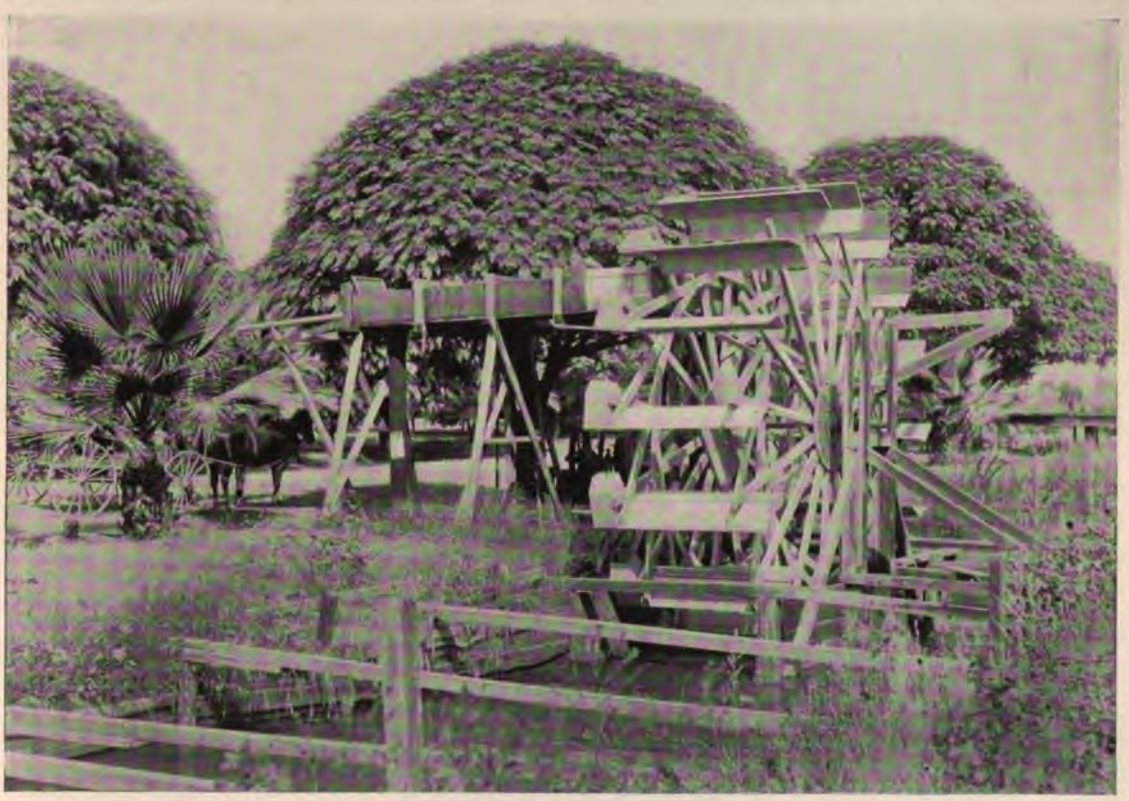
Photographed by Dr. James Douglas

WELCOMING THE RAILROAD

The first standard narrow-gauge railroad to enter Clifton over the Arizona and New Mexico Railroad

From whatever point of view the problem is approached, the sober conclusions cannot be avoided that the desert as an agricultural country has its limitations, and that it will never be reclaimed to the extent which the lobbyist has led the public to believe. The only apparent way in which the area of

irrigable lands can be seriously increased is by the construction of reservoirs to save the run-off of the forested mountains, especially that portion of the desert adjacent to the California, Utah and Mexican sierras. Even when this is accomplished there will still be left a vast area of desert. Hence the agricultural product of the desert will never be large, and this product with the exception of the fruits of Southern California will contribute but little for export, and will never be sufficient to supply the needs of its own population. The Great Desert is and will continue to be a profitable market for the consumption of the fresh and preserved food products and forage of the ocean seaboards and Middle West.



IRRIGATION NEAR FRESNO, CALIFORNIA

Notwithstanding the scarcity of water and forage the pastoral interests of the desert are considerable. Upon the stony foothills and in the mountain canyons the scant herbage and grass supply nutritious foods for many animals, and there are numerous cattle ranches, especially in the Chihuahua province, which are profitable and thriving. Statistics are wanting and hence exact figures cannot be given, but the live-stock values of the desert amount to several million dollars, exceeding the agricultural products many fold.

The chief problems with which the stockman is confronted in the desert are the procurement of water, the preservation of the range, and, except in Texas and Mexico, perverse laws which prevent his utilization of lands for grazing because they are held subject to homestead entries. The mechanical drill has helped him solve the water question, the Department of Agriculture has initiated a line of study of the preservation and introduction of forage plants, and perhaps some day the Government will permit the cattleman to lease and fence the desert hills and agriculturally hopeless wastes which are now mockingly withheld from him for the homesteader who can never come.

Beneath the sun-blistered surface of the desert, from the mountains of Utah to the tip of Lower California, from Huachuca to

Loaned by Dr. W. J. McGee

AN ABORIGINAL HOME IN THE DESERT

Photographed by Wm. J. Dinwiddie

Cuisihuichirachi, the tap of the miners' picks may be heard digging out the rich ores of mother earth: azurites and malachites, horn silver and lead carbonates, turquoises and onyx, and every other mineral product. Without the mines and railroads, which could not exist without each other, the Great American Desert would be no better off than the Sahara. The railway brought to the desert mine fuel, food and machinery, and to-day the mines not only give employment to most of the desert people directly, but support the railroads, commerce and agriculture of the desert. So important are the mining interests along the International boundary that one firm is now building over 300 miles of railway, from Bisbee into El Paso, parallel to the Southern Pacific. This line will have fully 200 miles of feeders; its sole traffic will be mine supplies and products.

A HOME IN THE DESERT
Southern California

So far as even the present agriculture in the desert is concerned, it would not exist were it not that its products were consumed at good prices by the people engaged in mining and transportation. One good mining camp, a few acres in extent—and there are many of these—gives employment and remuneration to more people than whole countries of arid farming lands.

Previous to the introduction of the railway, mining in the desert was limited to simple processes and products. Without mechanical drills and hoists only moderate depths could be reached, and limited quantities of ore taken out and treated. Consequently the deeper, larger and richer ore bodies remained untouched. Silver and gold were alone considered, and the mines which now yield over

Loaned by Dr. W. J. McGee Photographed by Wm. J. Dinwiddie

A GENUINE CHILD OF THE DESERT

$50,000,000 annually of copper could not be touched.

On the California trail near Pearce, Arizona, for forty years the overland pioneers built their camp fires against a ledge of quartz. Since the railway came these rocks are being crushed for the gold they contain at one of the most complete and profitable mills in America. The huge stamps and other machines were brought from New York, Pittsburg, Chicago and Denver; the oil for fuel to run them, from California; the food for the village of over a thousand people living in homes built of Texas lumber is all brought in from the great canning, packing, and fruitgiving sections of the country.

A dozen other places in the desert, each with its modern hoists, smelters, converters and electric appliances, are producing millions of mineral wealth per annum. Not only have new mines been opened and equipped, but many of the historic old mines of Mexico, abandoned because the limit of hand mining had been reached, have been re-opened with the aid of the steam-hoist and air-drill, and today are more productive than ever.

The Great American Desert in 1900 yielded over $100,000,000 worth of metals—chiefly silver, copper and gold. This represents at ten per cent. a productive capital of $1,000,000,000. In addition to the paying mines, as large an investment is now being made in mine development and preparation for the coming of lines of railway which are everywhere reaching out to new mining fields. There is every possible reason to expect that the mineral output of the desert will be quadrupled the next decade.

The copper products of the Sonoran deserts are fast approaching those of Montana and Michigan, and the development of the field is in its infancy. Between Senator Clark's United Verde in Central Arizona and the Rothschilds' famous Boleo, on the Gulf of California, the copper centres string out in a long line of profitable and prospective producers, such as these at Globe, Clifton,

WHO LABORS AND IS HEAVY LADEN

Morenci, Bisbee, Cananea, Nacasari, Carbo, and elsewhere. Mexico's production of gold has increased from $4,000,000, in 1897, to $10,000,000, in 1901; Arizona and New Mexico produced $3,500,000 worth of gold in 1901. Silver, instead of being a dead metal, is being mined with renewed activity and improved appliances. The American Desert, in 1901, yielded about $8,000,000 from the United States, and $34,000 000 from Mexico.

Many mineral districts of the desert still lie unproductive for want of transportation. This is especially true of the great copper, gold and coal fields of the Pacific States of Mexico, while the rugged Western Sierra Madre contain veins of ore awaiting transportation facilities which will furnish many new and important mines.

AN OPERA HOUSE IN THE DESERT
One of the largest and most modern theatres in America

The smelting interests are not the least important adjuncts of the mining industry, and each smelter gives employment to many workingmen. The American Smelting and Refining Company, with its capital of $80,000,000, has great central plants in the desert at El Paso, Aguas Calientes and Monterey. Many of the mines like Boleo, the Copper Queen, the United Verde and Greene Consolidated have their own smelting works.

The flood of emigration which steadily pressed across the Alleghanies, the Great Plains and the Rocky Mountains to the Pacific, crept around and across the desert, and it was not until the completion of the overland railways in the United States and in Mexico, the accession to power of Diaz (whose strong hand covered that portion of the desert

with a network of railways and telegraphs) that the industrial powers of the desert received their proper attention. In the last two decades there has flowed into the desert a progressive and enterprising population which has stimulated the earlier inhabitants by giving them work and opportunity.

The total population of the Great American Desert in 1900 was about 1,500,000 people or 1.5 to the square mile, or twice as many to the square mile as the Sahara. Of this total population in the United States, 300,000 are in Southern California, leaving less than one person to every two square miles in the remainder of the territory. Of the remaining

Photographed by W. J. McGee

ONE OF THE FIRST OF THE CARNEGIE LIBRARIES

Tucson, Arizona

AN AMERICAN COWBOY

700,000 people in the American portion of the desert, at least four-fifths are in cities, towns and mining camps.

These people in their own picturesque language are by profession "prospectors," "punchers," "nesters," "miners," "lungers," "Mexicans" and "promoters." In plainer English, mineral seekers, cattle men, irrigator-farmers, miners, railroad employees, health-seeking consumptives and laboring Indians, who have abandoned the "blanket" caste, and men who serve as intermediaries between the latent wealth of the desert and the ready cash of the East. As a whole they are an energetic lot. In the United States they consist chiefly of two classes, the Caucasian, whose ingenious brain conceives and develops industries and the Mexican (Indian) peasant, who does most of the manual labor. Across the line in Mexico the same conditions exist, except that the American finds a ready coöperator and companion in the higher caste of Mexican citizens.

The mainsprings of the desert are the hustling Western American miners and cattlemen. If any of our readers should still retain in his mind as a type of the desert citizen the bad man with the slouched hat, flowing mustaches and quick-acting revolver, he is at least ten years behind the times. Whether from the magnificent climatic conditions which induce healthfulness or from the fact that he represents the survival of the fittest, he comes very near the highest type of an American. Self-reliant, unaffected, well built, well dressed, well read and well traveled, he is a man of resources and action, available for any emergency, freer from provincialism, and a little more cosmopolitan than the average resident

AN OLD DESERT CHURCH

Sonora

CIVILIZATION IN THE DESERT

of any other section of our republic. He does his best and wants the best, and usually gets it. Whether in sombrero and overalls, or evening dress, he is always "a man with the bark on" from whom the bloom humanity has not been rubbed off by artificiality. The aboriginal population of the Great American Desert was and is of quite a different type from that of the nomadic savage who lived by the chase, in the forested mountains and upon the Great Plains. They were largely village dwellers, home builders and agriculturalists who by the arts of pottery and weaving had risen to the cultured stage of barbarism as distinguished from savagery. It was their social arts and habits of industry which produced the highest aboriginal type in the ancient Aztec, and it is their blood (not the Spanish) which today constitutes the ruling spirit of the most advanced of the Spanish-American Republics (Mexico). Upon the invasion of their environment, first by the Spanish and later by the Anglo-American civilization, they assumed at least a portion of these and today they are the people who constitute almost the sole laboring classes of the desert, being called Mexicans in the United States and peons or peasants in Mexico.

Even the Mexican laborer is coming along. In his own country American enterprise has increased his daily wage from twelve and one-half cents (Mexican) to a dollar and he is developing new wants proportionate to his new revenue. If he chooses to walk across the dry bed of the Rio Grande, or the mythical boundary line extending from thence west to the Pacific, his wages are doubled and he begins to indulge in cooking stoves, chairs, beds and other luxuries proportionate to his increased revenues.

It is the intensity rather than the density of the desert population that appeals to the observer. Whatever is done is done better than elsewhere. This is a necessity of the desert condition. It will not pay in that region to trifle with inferior methods or products. In mining the best man and the best machine must be had; in farming with expensive water it is a waste to plant poor seed; if cattle are placed on the range they must be good cattle and so on throughout the entire gamut of industry.

The conquerors of the desert seem to inspire a higher plane of living than that met with in the older rural regions and crowded industrial centres of the United States. There is no quibbling over innovations; if good they are adopted. The universities and agricultural and mining colleges of New Mexico and Arizona would be creditable to any country and they are hampered by no quarrels over dogma or political opinions.

The desert cities if not as densely populous as those of some regions, are unique in their thrift and prosperity. They are all picturesque communities, presenting an interesting mixture of architectural, social and business conditions, busy with commerce and buoyant with hopes and prospects. Merchants, miners, railway officials and professional men unite in their endeavors to advance each striving town, while an undertow of the picturesque Mexican laborer, cowboy, Chinaman and sporting character still give each place a distinctive Western flavor. Each desert city is thoroughly alive to municipal improvement and development. Electric lights and street cars, waterworks, schools, churches and public libraries abound, while many of the American towns have copied from their Mexican neighbors the picturesque plazas or ornate public parks within the central portions of the busy cities. There is hardly a place of equal population in the Northern or Southern States which could not learn useful lessons in tree planting, park making and public comfort from these live Western towns.

In many of the Mexican desert cities may be seen the union of all the best of modern industrial improvement with the picturesque Spanish architectural features for which these places are noted. Steam and electricity have asserted their mastery, but have concealed their cold mechanism behind the prettily stuccoed and flower-entwined walls of the artistic Mexican type. The very railways which would give the average village in the adjacent United States any kind of a ramshackle depot, construct ornate buildings in the Mexican cities, surrounded by flower gardens in harmony with the tastes of the country. If all the mayors in the United States could witness the marshaling, inspection and instruction of police, street sprinklers, sweepers and garbage carts, which takes place at daylight each morning in the city of Chihuahua, they would learn some lessons in municipal cleanliness.

...e reets fifteen years ago
:re enlivened by no other sound than the
ieating of kids carried to the slaughter, now
ɔoasts of being the Yankee town of Mexico,
with its railroads, breweries, steel works, cot-
ton mills, brick yards, wagon shops, soap fac-
tories and nearly every other kind of indus-
trial improvement. Meanwhile in the midst
of this industrial revolution the old art is pre-
served. Picturesque churches like those con-
structed in the first century of the Spanish
onquest continue their slow course of con-
ɜtruction. Even in the Pacific State of
Sonora, which one can reach from New York
he cares to travel seven days and nights in
Pullman car, the cities of Hermosilla and
uaymas are model municipalities, thriving in
heir commercial prosperity and altogether
leasing in aspect.

The Great American Desert as a place of residence is one of the most salubrious on earth. The same climatic feature which renders it sterile—want of humidity—gives) its air a crystalline clearness and purity ɔwhere else found. At first sight the desert ɔrrifies the passing traveler, but he who 'ells in it for a time learns to love its life-ing air and landscape. In absence no ɜson of club and society can still the desert ɔarning, which will not be satisfied until the pure ozone of the desert is breathed again. He who has tasted this life once can never live content in those more humid portions of the earth where dense population must thrive.

Like the greater ocean, the desert has been a vast storehouse of tragic, pathetic and mysterious history. What stories could it tell of the annihilation of those who have tried its conquest before the coming of the railway! Now and then an old bridle bit, a spur, perhaps a buckle, rusted and corroded, recall the days of Spanish reconnaissance. Great ruins like those of Casa Grande, Gran Quivera; of San Vincente, testify to the death of communities that failed by organized effort to thwart nature's inexorable law. Deserted houses of more modern structure, such as those of old Fort Bayard, recall the days not long past when soldiers lived and endured the desert life. But now steam and telegraph have annihilated even the Great Desert distances, and its future is bright and hopeful.

In the noble wastes of rock and plain man's soul swells to contemplation and forgets the dross and sham of his artificial civilization. The endless vistas uplift the thoughts and the skies seem to bring with them a clearer vision and content than all the mists and fogs that ever hovered over a humid landscape.

THE UNITED STATES IN CUBA

THE PRINCIPAL ACTS OF AMERICAN CONTROL BETWEEN THE WAR AND THE BEGINNING OF SELF-GOVERNMENT

BY

CHARLES G. PHELPS

CLERK TO THE SENATE COMMITTEE ON RELATIONS WITH CUBA

THE great task assumed by the United States in Cuba was begun on January 1, 1899, when General John R. ɔooke became Governor of the island. The ɔople had customs and language different ɔm ours; they had suffered from four cen-ıries of oppression and were incapable of ıstaining themselves among the nations of e world. Old laws, obsolete for present nditions, were in force; starvation and sick-ness were common and the villages and cities reeking with filth. To relieve the starving, five and one-half millions of rations were issued at a cost of $1,500,000. Medicines were supplied and hospitals were equipped. In the provinces of Matanzas and Santa Clara alone 36,000 widows and 58,000 orphans were fed, clothed and provided with shelter. The United States supplied seeds, horses and agricultural implements that farm

ing might be begun again, and it appropriated $3,000,000 to pay the officers and soldiers who had served in the Cuban army, each man receiving $75. The purpose of all the changes in the laws and of the administration has been to fit the people for self-government.

On January 11, 1899, the civil government was divided into four departments—the departments of "State and Government," "Finance," "Justice and Public Instruction" and "Agriculture, Commerce, Industries and Public Works"—later increased to six departments. Early in 1899 the office of Auditor was established, with an accounting system like ours. Owing to rumors of maladministration the Senate, on May 26, 1900, called upon the War Department for accounts from the date of occupation until June 1, 1900. This reaudit, making over 4,000 pages, gave in detail all the money transactions; and, aside from the postal transactions, the accounts perfectly balanced.

The courts were reorganized—some abolished and new ones created. Judicial districts were changed, minimizing the cost of maintenance and yet making the courts easy of access. A police court was established in Havana; trial by jury was established; and the writ of habeas corpus was instituted. Interpreters were employed; stenographic records of trials were kept as well as uniform records of proceedings; and on April 14, 1899, a Supreme Court was created for the Island of Cuba to consider appeals that had formerly gone to Spain.

Several times has the time limit been extended for paying debts incurred in planting crops and maintaining property during the war. The marriage and divorce laws were regulated, modified and made uniform; sponging and fishing laws were enacted; and a Department of Posts was established, according to our system and under experienced officials. A census finished October 16, 1899, found the population to be 1,572,797.

Under a Superintendent of Schools a new system of public schools was gradually put in operation, until now there is a complete and uniform system throughout the island. In 1898 there were 541 public schools; in January, 1900, 635; and in June, 1900, there were 3,313 schools, with an enrolment of 143,000 pupils, maintained at a cost of over $4,000,000. Night schools have been established, also schools of engineering and architecture, surveying, stenography and typewriting, and normal schools for the education and training of teachers. The institutes, similar to the high schools in this country, located at the capital of each province, have been reorganized and placed upon a uniform basis with teachers selected by competitive examination. At the Havana University the curriculum has been rearranged, the faculty reorganized, incompetent professors removed and competent ones appointed, new chairs of learning established, new laboratories installed, and every effort made to secure the highest efficiency.

A lighthouse board was established; the pardon system was revised; and a commission was formed to consider methods of taxation. The rural guard has been reorganized on the basis of United States Cavalry. Municipal authorities have been freed from the intervention of the civil governors of the provinces.

But the first notable step toward self-government was taken when local elections were held to replace appointments of the Governor-General. The law fixed the qualifications of the voters and provided in detail election methods; on June 16th the first general election passed off quietly.

The Department of Public Works has been reorganized with provisions for the appointment and salaries of officers, the keeping of records, the accounting of funds, the maintenance and inspection of public property, the manner of awarding contracts and placing upon a practical basis the system of improvements in public works throughout the island. The department has built new roads and reconstructed old ones; repaired bridges; deepened harbors and improved water fronts.

Upon the occupation of the island the prisons were found overcrowded, without proper food, clothing or bedding, and with practically no sanitary arrangements. Many persons were confined without even knowing the charge against them; others, guilty, had been detained beyond their term of punishment. The incommunicado system has been abolished, the prisons cleaned, proper clothing, bedding and food supplied, and the most modern sanitary arrangements installed, while many hundreds of prisoners have been released against whom no charges were found

exist. All the prisons have been placed under an inspector of prisons, who carefully examines the sanitary conditions and the condition of the prisoners, inspects the food, clothing, records and discipline, and recommends advisable changes. The Correctional School for boys has been removed from its unhealthy quarters in Havana to an adjacent town where there are excellent sanitary arrangements and opportunities for industrial and mechanical training. A reform school for girls has been established near Havana, furnished with every facility for training and education.

The charitable institutions and hospitals, r years neglected, were found without in- lligent administration, medicines, surgical struments, or sufficient supplies of bedding and clothing. The inmates were found :overed with filth and vermin and there was ıo system of nursing. In one, for illustra- :ion, 400 boys had only one spigot from which vater could be obtained for bathing, and no ıtensil other than the tin plates from which hey ate, in which to wash. Lepers were also ınd in many parts of Cuba, even walking ɔut the streets of Havana. Shortly, how- ɛr, a large building on the outskirts of the ıty was prepared and equipped with every nodern improvement; the unfortunates vere gathered there; and regulations were ade placing all charitable institutions under board of commissioners appointed by the ›vernor-General, to be conducted as such titutions are in this country.

Cleaning up the island was as arduous as y part of the work. The city streets had :en the receptacles for garbage and other use for centuries, making it necessary to down several feet in some places to find ıat had been the original paving. The blic buildings had been neither cleaned nor any way cared for. The cesspools, located der the flagging of the interior courts of buildings, had remained untouched for ırs, causing the spread of yellow fever ıong the officers and troops. Yet in a mparatively short time the streets had been eaned and repaved, the buildings repaired, esspools cleaned, and modern sanitary con- ɛniences installed. An idea may be gained the unsanitary condition existing when it said that from under the custom house ne over 1,200 cubic yards of filth and several tons of fetid matter were removed. At Regla, opposite Havana, the large warehouses which had been used as barracks for the Spanish soldiers were found to be filled with filth and vermin, a veritable bed of contagion and disease, and these are only two instances out of a great number.

For hundreds of years yellow fever had existed in Havana. In the months of October, November, and December, the yellow fever months, from 1890 to 1900, the smallest number of deaths, 52, occurred in 1898, the largest, 631, in 1896, while for the same period in 1901 no deaths have occurred from this disease, and the mortality from all diseases does not exceed that of Baltimore, or other cities in the United States. The streets have been repaved and a street-sweeping service put in operation. A system for the daily collection and disposition of garbage and refuse is in use, with frequent house to house inspections, to see that there is no violation of the sanitary laws. In the general improvement of the city the parks have been improved, and all fashioned after the park system of this country.

Now when the island shall be handed over to the people of Cuba, they will possess only what they have long fought and suffered for—a government, based upon a constitution which is the work of their own people, well adapted to their purposes, and founded upon the principles of the free and enlightened nations of the world. We took it with nothing but distress, sickness, and oppression on every hand; we give it back with health, peace, happiness, and freedom. What was once one of the dirtiest cities in the world is now one of the cleanest and healthiest. The transformation stands as a monument to the American soldier and to the Government of which he is a part.

On September 15th, 1900, the first election was held, on November 5th the constitutional convention met, and on February 21, 1901, the constitution was completed. On June 12, 1901, the convention adopted as a part of the new constitution the Platt amendment. On October 14th a provisional electoral law for the constitution of a republican government for Cuba was announced, and on December 31st an election was held to choose presidential and senatorial electors, governors of provinces, and members of the provin l s. On January 24, 1902, the f at and senate of Cuba were choser

THE POLITICAL LEAD OF IOWA

WHY IT IS THAT A PRAIRIE STATE HAS SO CONSPICUOUS A REPRESENTATION IN NATIONAL AFFAIRS

BY

ROLLIN LYNDE HARTT

ONCE it was regnant Ohio; now it is regnant Iowa. Once it was Ohio sending its Grant, its Garfield, its Hayes and its McKinley to the White House. Now it is Iowa, represented at the national capital by two Cabinet officers, Wilson and Shaw; by Allison, oldest in service of the Senators and Chairman of the Senate Committee on Finance; by Dolliver, the most convincing orator in Congress; by Henderson, Speaker of the House, second in power only to the President; by Hull, Chairman of the Military Affairs Committee; by Cousins, probably the best orator of the House; and by Lacey, Chairman of the Committee on Public Lands. Ohio, for all its amazing succession of triumphs, had never at any one time such supremacy. Why is this?

The answer is easy. Look at Ohio and you behold an out-grown Iowa and what is Iowa but a half-grown Ohio? Each has produced its own type of man; and the accession of Iowa to the rank and place once held by Ohio is natural.

What was there in the making of Ohio that pre-determined the large number of Ohio presidents? Look at its history. Its first settlers were heroes but not adventurers. Only the most determined tenacity of purpose could hew away the forest. Only the hardiest patience could turn a wilderness into a garden. Only those who sought permanent homes would pay such a price for success. Settlers called themselves "movers"; they moved for good; their ranks were filled with practical, long-enduring, hard-drudging mortals, who brought with them their wives and babies. Having come to stay, they behaved like Christians, built churches and schools, and built also a stout-timbered structure of social good order. Ohio had never a "wild western" flavor. Instead, the countryside rang with the woodsman's axe and the ploughboy's song. Instead of wild oats, the Ohioans sowed a rigorous self-discipline—each Buckeye becoming thereby a sort of multiple of himself, strength clothed upon with strength.

And now a step further. The forest had not only tempered the moral and intellectual quality of a picked company from the East; it had, by a special dispensation, been able to summon that picked company from widely various sections of the East. They went from Puritan New England, from New York and New Jersey, from "Dutch" Pennsylvania, from Kentucky and Virginia. Families of diverse origin intermarried; and as the Briton sums up in himself the qualities of Celt, Saxon, Norman and Dane, so the Ohioan sums up the qualities of all those people that went to his making. But before this process of amalgamation had taken place—and for the matter of that it is not yet complete—there was everywhere to be seen a most inspiring form of intellectual excitation. Six pioneers never came together without debating. Puritan crossed swords with Cavalier; German with Jerseyman. In the country store, in the horse-shed after church, in the school-room or the barnyard, opinions clashed. This made a people of ready minds, of fluent tongues and of insurgent wills.

And their geographical position did much to foster a profound national consciousness by filling their talk with affairs of the broadest interest. Ohio was on the main highway of westward migration. There was always fresh news, by word of mouth, from the East; there constantly drifted through Ohio a returning tide of disappointed fortune-seekers from a yet farther West. If you wanted to know the popular sentiment of a continent you asked an Ohioan, who had ever an ear to the ground.

Here, then, was a place to look for a President. By inheritance hardy, by discipline courageous, by all formative influences pure

heart, by constant stimulus keen-minded, / varied contacts kept always in sympathy with the purposes of his country—here was the representative American. There remained only the pleasant little task of stalking about with torchlights and getting votes for him.

As luck would have it, two or three very favorable circumstances conspired to facilitate the process. As Ohio chanced to hold its State elections in October, whoever stood for high office amongst the Buckeyes had the gaze of an anxious nation riveted upon him. As went Ohio, so went the country. Consequently the statesmen of Ohio became known throughout all the land; nominate any one of them for President and the battle was most auspiciously begun. And in the next place you could appeal with quiet confidence to the allegiance of numberless "ex-Ohioans," who, as the years rolled by, had moved further west, but who yet called Ohio their fatherland. Still again, wherever you carried your chieftain's portrait—whether east, west or south—this candidate looked the part and inspired confidence. You could send him to ıy section of the realm; and in figure, in anner and in speech he seemed to personify emocracy. He was a plain man, a leader of plain men. He quite evidently embodied the theory of government of, for and by the people. Therefore came Presidents out of hio

What now of Iowa? The Buckeye spirit s moved westward; and apparently it is in wa that we shall look for a repetition of the me thing. The brain and will of a prairie ople have risen to a superb preëminence in e councils of the national capital. Prob- n: to explain that preëminence.

First among many causes ranks Western— may almost say Ohioan—inheritance; for wa is lineally descended from Ohio and ates like Ohio. It has, to be sure, an imessive infusion of migrant New Englanders, t its main factors have from the beginning en chiefly made up of the Western-born. hen the children of Ohio arrived at man's tate there came upon them a great thirst- for pioneer opportunities. So in many nother Western commonwealth. To live ıd to toil in a ready-made world seemed not ıough; they must find them a new frontier; ıey must forge their own destinies, build their own fortunes. So the prairie was opened to settlement.

Now the lesson of the prairie is not the lesson of the forest, and the early Iowans did not read the book of experience as the early Ohioans had read it. The prairie is flat and monotonous, and there was a corresponding flatness and monotony in the life of the first Hawkeyes. It lacked romance. It appealed scarcely at all to the gaudy-hued virtues of daring and endurance. It was easy, this peopling of treeless plains, this tilling of virgin soils; and besides it was swift. The days of hardship and privation fled fast away; a few years sufficed to remove all semblance of pioneering; wealth accumulated; comforts abounded; and the Iowans grew up into a sober and simple maturity, whose spirit was gentler than that of the Ohioans. They delighted themselves in quietness; yet sons of strength they were, every man of them.

But if the prairie was level it was also very much of a piece in its geological composition. The material resources of Ohio are many and varied; the material resources of Iowa are best summed up in the terms of agriculture. In any corner of that "American Mesopotamia" you will hear three lusty nouns—corn, cow, hog—and having heard these you have heard all. Hence the natural result: the Iowans, being one vast guild of fellow-husbandmen, have lacked the intellectual stimulus that comes from contact between men of different callings. You can travel over their State, from Sioux City to Davenport or from Dubuque to Council Bluffs, and not meet one brilliant mind or a single amazing character. Yet you will find everywhere a most commendable dead level of honesty, decency, practicality, good sense and well-fed prosiness. And the world is so constituted that these simple, brown-colored virtues, properly compounded, spell political sanity. Add strength and there stands a statesman. No hot-head is he; instead you may trust him with the weightiest affairs of a nation. Neither will any man call him eccentric; he is as incapable of eccentricity as he is of brilliancy. You shall find him the very soberest of counselors.

Yet again, that prairie land, by reason of its uniformity, forbade the building of g

The Iowans, therefore, escaped corruption which is bred by

disease and disorder. They have never got under the heel of a Platt or a Croker.

But perhaps you will say that this explanation of the Iowans' evolution should apply with equal force to Kansas and Nebraska, both of which are Western-bred States, both of which revel in aching monotony of scenery and geography, and both of which have escaped the curse of great cities. To this I shall answer a vigorous No. Kansas is the haven and heaven of the erratic; it was founded by them. And both Kansas and Nebraska are swept by the hot wind, and the hot wind makes bad politics. The hot wind accounts for William Jennings Bryan. It comes roaring out of the South; it draws its flaming scythe across Kansas and Nebraska; it kills the crops; it crazes the farmer Plunged in ruin, unable to meet his indebtedness, and enraged against destiny, the farmer shrieks vengeance. Upon the weather-man? No; upon the administration at Washington. He will tear down the political heavens and set things right. Then comes Mr. Bryan tinkling his fifty-cent medals and calling them dollars. Free silver follows the hot wind.

But in Iowa it is not so. In Iowa crop follows crop in so sure a succession of triumphs and so unfailing a wake of prosperity that all are enriched. So rich, indeed, does the farmer become, that he sooner or later lets out his acres to husbandmen, while he himself moves to town, where he lives in sweet comfort the rest of his days. And that is why Bryanism never crossed the Missouri to trouble the Iowans.

Open-minded, however, the Iowans certainly are, but their open-mindedness is of an eminently practical sort. They experimented with Prohibition, got bad results, gave up their strict laws, and instead adopted the mulct, which works admirably. They abolished capital punishment, got bad results, and went back to the old order. They welcomed Professor Herron, got bad results, and permitted Professor Herron to pack up his socialistic belongings and take himself away. Socialism in Iowa! There isn't a worse soil for it in all God's world. Socialism provides amusement for imaginative minds—minds that get fun out of thinking how nice the world would be if it were something else. And Iowa produces no minds of that sort. Rather has it produced the sensible, contented, straightforward, board-walk type of mind—ready always to hear a new gospel, but testing that gospel by the canons of practicability.

You can always rely on Iowa to send a sound statesman to Washington, and when they have sent him there they keep him there. Sane themselves, they appreciate his sanity. They are the best constituency in North America. Never was there a more perfect adjustment of the principles of representative government. And by grace of this splendid loyalty, which returns the same man term after term to his end at the capital, the Hawkeye statesman becomes an expert—making up by long experience and slowly-acquired knowledge whatever he may lack of conspicuous brilliancy.

Here, then, we may have seen the type of man Iowa produces, and why it produces that type. Now let us ask why all America applauds the ascendency of Iowa. I think there are two clear reasons. For one, Iowa is no longer a Western State. Once, when I had settled down to live in Montana, a good lady said to me, "I'm so glad to hear you're from the East. I'm an Easterner myself." Of course I hastened to ask her from what part of the country she had come. "Ioway," she answered. That was stretching a point, I admit, but not stretching it far. So vast and so magnificent an empire has sprung into being beyond the Continental Divide, that the centre of things has shifted and now lies west of the Mississippi. Meanwhile the prairie, rich with grain and teeming with cattle—reaching, as it does, from Batavia, New York, to the Bad Lands of North Dakota—has become America. There, in the measureless Mississippi Valley, the Americans have their dwelling. What is the power of the East or the South or the Farthest West compared with the power of that great republic of the plains? The Middle West rules. Consequently the Hawkeye State, lying betwixt the two great rivers of our continent, and within the very heart of our territory, comes naturally to a noble preëminence in politics. If Iowa is producing a type of manhood which is at bottom the American type—plain, honest, sensible, strong, and not given to vagaries—Iowa is entitled to that foremost place which formerly belonged to Ohio.

WHAT THE LIGHTNING FLASH REVEALS

HOW THE SPECTRUM OF A LIGHTNING FLASH WAS PHOTOGRAPHED AT HARVARD—WHAT THE RESULTS SEEM TO PROVE

BY

PHILIP S. FISKE

IT has been comparatively simple for scientists to photograph the spectra of luminous bodies, but a series of photographs made last summer at the Harvard Astronomical Observatory in Cambridge accomplished the novel and difficult feat of catching the spectrum of lightning. Interesting in itself, the achievement became doubly interesting when results showed a startling resemblance between the atmosphere of the earth, through which the lightning passed, and the atmosphere of Nova Persei, the new star which appeared toward the end of 1900. Photographs of the spectrum of Nova Persei had already been taken.

First, a word explaining spectrum photographs. Heat anything to the point where it gives out light, and then pass a ray of this light through a prism of glass, and a line of colored bands will result, ranging in some cases all the way from violet through blue, green and yellow, to red. That variegated strip is the spectrum, and the different series of these bands represent the elements in the substance examined. The most familiar spectrum is, of course, that of the sun when its rays are intercepted by the prismatic drops of a passing shower and produce a rainbow. The glass prisms hung as decorations from old-fashioned lamps also make spectra.

But a photograph does not produce colors and lightning will not stay quiet to have its picture taken. How, then, can the spectrum of lightning be photographed?

The centre of astronomical photography is now, and always has been, at the Harvard Observatory. There the first pictures ever made of stars were taken more than half a century ago. There the first successful photograph of a stellar spectrum was taken; and the spectra of stars have for some years been recorded and studied with the aid of the camera; and there the photograph of the lightning's spectrum was caught. Wonderful skill and ingenuity have been displayed by Prof. E. C. Pickering, its director, and by his assistants, but they met many failures before succeeding. The same instruments were used to obtain the spectrum of lightning as are used in taking star spectra, but, of course, they had to be used quite differently, for stellar photography is managed by clockwork while the electric flash requires instantaneous manipulation.

As the flashes nearly always occur during rain, and as every drop is a little prism by itself, the rays of light are all broken up before they get to the apparatus. Besides, it is impossible to tell exactly when or where there will be a flash. But last summer there were a number of "dry thunder storms"—clouds and lightning without rain—and they gave the opportunity which resulted in the remarkable pictures taken by Mr. J. H. Freese of Harvard, under the direction of Mr. Edward S. King of the Harvard Observatory. Three were secured in July and the fourth in September.

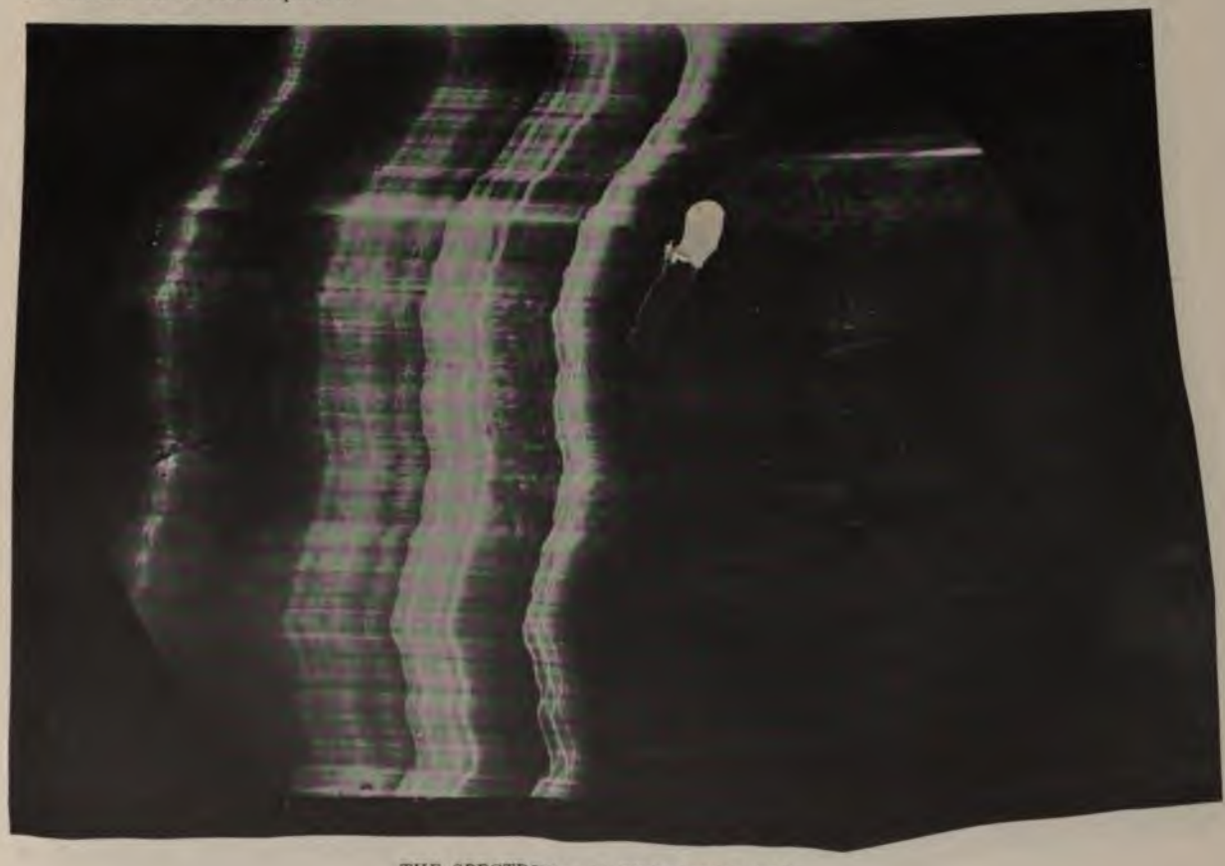
In a general way Mr. Freese took the pictures much as he would have taken snapshots with a pocket camera, only the camera he used was very much larger than he himself. By watching the part of the sky in which the lightning flashes appeared oftenest, he could point his great instruments approximately and then when he thought a display came within their field make an exposure and change his plate. Many of the negatives which he got in this "catch-as-catch-can" way were fogged, but four satisfactory ones were secured, the first of the kind.

The camera which Mr. Freese used was a

photographs show, however, a strange variation in the hydrogen lines which some scientific men have taken as indicating that there may be some finer subdivision of nature than has yet been recognized. A few have gone so far as to suggest that there is some final element, as yet undiscovered, from which all of the so-called chemical elements are formed by combination, and one man, at least, thinks that it may turn out to be electricity.

But there is another side to the story which these wonderful photographs tell. There is a curious resemblance between the photographs which the Harvard Observatory has taken of the spectrum of lightning, which is as a matter of fact the spectrum of the atmosphere of our world, and those made at the same place of the spectrum of Nova Persei, the new star recently discovered. The hydrogen lines are nearly identical in the two sets of pictures. Furthermore, there are in the spectrum of Nova Persei none of the lines denoting the presence, in gaseous forms, of metals in its atmosphere.

ELEVEN-INCH DRAPER TELESCOPE, SHOWING PRISM FOR PHOTOGRAPHING STELLAR SPECTRA



THE SPECTRUM OF THE NEW STAR

"WHO IS NIXON?"

THE MYSTERY OF A CLEAN MAN AT THE HEAD OF THE PIRATE CREW OF TAMMANY HALL—HOW IT CAME ABOUT AND WHAT IT MEANS

BY

FRANKLIN MATTHEWS

IN October, 1897, Tammany Hall was making its first nominations for minor offices in Greater New York and conventions were held all over town. A reporter reached the place where an Alderman was nominated in the Twenty-fifth Assembly District after the convention had adjourned and only two of the delegates remained.

"Who was nominated for Alderman?" he asked in a hurry.

"Nixon," was the answer.

"What's his first name?"

"I think he spells it L-e-w-i-s," was the reply.

"Well, who is Nixon, anyway?" was the next query.

"Faith, I don't know," said the delegate who had remained silent up to that time.

"What! Don't ye know Nixon?" asked the first delegate in a tone of disgust.

"No, I don't," answered the second delegate. "Who is he?"

"Well, he's the boss o' the Navy Yard," said the first delegate.

"Sure, he's all right!" said the second delegate with a whoop. "That's the kind of a man for Tammany Hall! He's one of the best men that ever Tammany put up!"

That was the first and only office for which Lewis Nixon was ever a candidate at the polls, and he was defeated. Today, as the more-or-less-recognized leader of Tammany Hall, he counts that defeat fortunate. Then he was simply an unknown man who had been affiliated actively with Tammany Hall for only two years, a gentleman in politics—a strange creature in Tammany Hall. The most that the rank and file knew of him was that he was a ship-builder and a young man. When the offices were parcelled out after the election Nixon wished to be Dock Commissioner. He aspired too high. The finest plums of municipal jobbery in New York under Tammany Hall grew in that department. What was needed there was a skilled political husbandman, not a professional man with high-minded ideas about the management of a public trust. They made him the head of the East River Bridge Commission instead, and with a blare of trumpets pointed to him as a model man for the place.

The Spanish war came on and Mr. Nixon ceased to be an unknown man. The dazzling record of the battleship *Oregon*, which he designed, brought him fame. Public letters to Congressmen on harbor improvements, on the commerce of New York and similar subjects, written by him and signed by Richard Croker, added to his reputation among his friends and those in Tammany Hall who knew their authorship. Magazine articles upon ship-building and commerce, and papers read before naval architects upon a variety of technical and abstruse subjects increased the public knowledge about him. Some of the most novel and daring conceptions of the ship-builder's skill were launched from his New Jersey shipyard, still further advancing his reputation. Richard Croker in all earnestness wished to name him for Vice-President at Kansas City, as will be known when the full story of what was done there becomes public. Mr. Nixon, with hundreds of thousands of dollars of Government contracts in his business, stopped the movement by boldly announcing that he believed in ship subsidies. That also made him better known.

Then he was appointed by Tammany to investigate the conditions of vice and the responsibility therefor in New York city. To some he seemed to make a somewhat inglorious record there, but there is another story about it. When he finished the work he was known through and through to Tammany Hall. Most of the leaders snarled and snapped at him. Many cursed him openly.

Scores of the lowest followers of Tammany wrote letters to his wife, with threats to throw vitriol in her face and to put out the eyes of her boy. Mr. Nixon brought the responsibility for the awful conditions in New York city straight to the feet of Devery, Chief of Police, and laid it there. Some persons said that he should have taken it directly to Tammany Hall and put it at the feet of Croker, saying, "Thou art the man!" Tammany hated Nixon then. A large part of Tammany hates him today.

Croker, sullen and defiant, came from his English home in 1901 and found the gamblers' "combine" in practical control of Tammany Hall. It was only because they dared not trust one another and because they feared the brutal strength of Croker that they did not depose him. He wished to nominate Nixon for Mayor. The gamblers said No. Croker had only three majority on the Executive Committee of Tammany Hall. The Brooklyn Democrats also said No to Croker and he was forced to name a Brooklyn man for Mayor, a man of the highest personal character, but one who had reviled him and held him up to scorn. But Croker wished to win that fight. He wished to punish the gambling combine that again had caused Tammany Hall to be found out and had made it a by-word. It was all right for him to make money out of politics. Avarice really was and is his political god. But he did not mean that others, emulating his example, should go the frightful lengths in open debauchery and robbery that they had gone.

The election brought a bad defeat to Croker, but it brought a worse defeat to the gamblers. Croker, humiliated, wrathful, his nerves shattered, gathered together his strength, and, although his days as Tammany's leader were numbered, he made his last stand and sailed away to England with a spirit of satisfaction in his heart, for he had placed Lewis Nixon in his seat at Tammany Hall as leader and as Chairman of the Finance Committee. Tammany did not want Nixon, but he was in charge nevertheless, an upright, determined, virile, energetic man, utterly without experience in handling ward-heelers and in following the devious mazes of party management, and with only a keen intelligence and sturdy self-reliance in his own sense of integrity to back him.

The question had ceased to be, "Who's Nixon?" It was now, "What does it all mean?" Those who knew Nixon intimately wished to know what his motive could possibly be in accepting such a place. No such figure had ever appeared in American political management. Croker's enemies and many of Croker's friends smiled and said that it was only a crude joke by "the old man," and that Nixon was really a figurehead and a dummy, and that, as a man who could be trusted, he was simply keeping Croker's place warm for him.

Nixon protested that he was no figurehead and that Croker had retired for good. His first task was to prove that. He has now partly succeeded. His second task will be to retain the leadership,—a story for the future to tell, for it means a fight to a finish.

What does it all mean? How comes it that an honest man, of good repute, a student, a person of international reputation as a shipbuilder, is in charge of Tammany Hall? For if ever a man answered to the requirement of the Roosevelt standard that a public man should "be cleaner than a hound's tooth," that man is Lewis Nixon. No predecessor in the leadership of Tammany came in as he has come. The commander of that ship always has slashed his way to the command from the stoke-hole over the bodies of his rivals. The Tammany ship has usually carried a large passenger list of eminently respectable men who have been allowed to come on deck in times of need for the fine showing that they could make, and who have been kept between decks when acts of piracy were performed. These have shut their eyes and ears to what the crew was doing under the comfortable assurance that "the other fellows are just as bad," and the plundering has gone on.

Now, one of these eminently respectable passengers has been brought up and put in charge of the pirate crew, and he stands on the quarter-deck with a bludgeon ready to strike down the first man who raises the black flag. To bring about his defeat it will be necessary to steal upon him from behind. Whatever his motives, be they pride, ambition, desire to minister to the public good, gratitude and a willingness to serve the man who wished to honor him and couldn't, he has accepted a post which is bound to give him widespread

notoriety, bound in more than one way to excite suspicion, bound to plunge him into turmoil and controversy, bound to bring him into associations which a man of his character might reasonably be expected to shun.

Out of this situation, to those who know Mr. Nixon well, two facts stand clearly. One fact is, that whether or not he is the real leader of Tammany Hall, he is sincere in thinking that he is; and the other fact is that, if ever he finds that he is not the real leader, he will step out; for he is incapable of acting as a figurehead or being a party to any game of duplicity. Mr. Nixon has a logical and mathematical mind. He can think only along straight lines; he knows no other method in his work, whether that work be the building of a ship or a bridge, or making a political machine effective. All this intensifies the mystery of his taking up the onerous task of managing the Tammany organization, which is regarded throughout the land as a band of political outcasts.

Mr. Nixon is forty-one years old, six feet tall, straight as an Indian, with a stalwart, swinging military carriage and "personal magnetism." He takes up every problem in a direct, energetic way that denotes self-confidence and will-power. He has shown these qualities from his boyhood. Born of a family in moderate circumstances in the outskirts of Leesburg, Va., he learned his Democratic creed from his father, Col. Joel Lewis Nixon, from whom also he inherited his fondness for mathematics. He wished to go to the Naval Academy and he approached his Congressman, General Eppa Hunton. General Hunton's appointees to Annapolis and West Point had not turned out well, and young Nixon offered to take the most rigorous examination that could be provided for him. He won the cadetship with ease, and before he was graduated he had the distinction of wearing the decoration of a star on each lapel of his coat to show that he was the most brilliant student in the Academy. He could lead a german and enjoy it as keenly as he could deploy the cadet battalion on the parade ground, but there was no snobbery about him. When he was sent by special arrangement to the Royal Naval College in England, where he had for a classmate the present Prince of Wales, he easily outshone the rest. He became a constructor in the navy. He helped to build the first ships of the new navy, the *Chicago* and the rest, at Roach's shipyard. He designed most of the new tools for the navy yards. He was sent to the Brooklyn Navy Yard to put the first armor on our ships, the old compound armor on the monitor *Miantonomoh*. While there, in the late eighties, he boarded at a hotel in Broadway, New York, in John Scannell's district, and in that way, through natural Democratic affiliations and a liking for politics, he drifted into attending Tammany meetings. But, being a naval officer, he took no direct part in politics. He was simply a member of Tammany.

Then Mr. Nixon designed the three great battleships of the *Oregon* class, and the Cramps induced him to leave the navy to help them build two of them. He was Superintending Constructor there, and he had charge of 6,000 men. It was there that he learned the management of men, an experience needed for a political leader. Soon he decided to try to make a name for himself as a ship-builder. He obtained control of a shipyard in Elizabeth, N. J., and practically without money he built up a great establishment. That work was begun in 1895 and he moved to New York and openly became a member of Tammany Hall, attracting the attention of the leaders at once as an unusual man. He loves an energetic life and that accounts at least for his entrance into politics.

Soon his work in ship-building secured public notice. In six years he built no less than one hundred and four boats. No such variety of work was ever turned out of any shipyard. Some of them were boats such as were never made before. He made boats with six screws for the Yukon, boats to penetrate into the river fastnesses of the Amazon, Magdalena and Orinoco Rivers, a fleet of submarine craft, a fleet of steel barges for the Erie Canal, a fleet of dumping scows, gunboats, a monitor, a great ferryboat, a monster float for carrying freight cars, yachts of every kind, from the most luxurious steam craft to swift launches and sailing vessels and houseboats.

All this work stamped him as probably the foremost ship designer of the world. He doubled the size of his plant, overcame labor troubles, had time to write papers, to appear before Congressional committees, and to take a keen interest in social affairs. Governor

Odell openly commended his ideas about improving the Erie Canal and practically adopted them. Mr. Nixon had made battleships of 10,000 tons do the work of English battleships of 14,000 tons. When he calculated the centre specific gravity or the metacentre of a battleship his figures were correct within a fraction of an inch. Other constructors were satisfied if their work came within the fraction of a foot. He brought about changes in the methods of launching ships, and at such times he could adjust the "moment of buoyancy" to the "moment of weight" with the utmost nicety.

Another remarkable quality of this remarkable man is what might be called his news instinct. In 1888 a reporter who knew nothing about ship-building went to him in Cramp's shipyard to get material for an article about our modern warships. Mr. Nixon took him on the protective deck of a cruiser, talked to him for half an hour; then loaded him down with pamphlets, and told him to go to his desk and to study for a day. The reporter wrote an article that brought to his office the head of the Cramp company on the Sunday of its publication to congratulate him, and the Secretary of the Navy, Mr. William C. Whitney, wrote a letter of appreciation. It ought not to detract from the value of this statement to say that that reporter was the writer of this article.

Still the mystery deepens why he is at the head of Tammany.

Now as to Tammany. It has never been consistent except in one thing, and that is in securing public plunder. It has never been "good" except when whipped at the polls. Aaron Burr really took it into politics. It sympathized with the French Revolution. It made a mockery of Alexander Hamilton's funeral procession. It always took care of the "kickers" and gave them offices. In 1791 it declared that only Americans born should hold the offices. It embezzled the $1,000 given to bury the bones of those who died on the prison ships in the days of the Revolution. It opposed every workingman's project for justice in the early days. The Irish mobbed its wigwam in 1817. It fought as "impracticable and chimerical" the Erie Canal, that in one year added $60,000,000 to the business of the port of New York. It delayed for twenty years acting on manhood suffrage and the abolition of imprisonment for debt, and then came to advocate them so that its leaders might regain power and get more money. As early as 1817 it lamented "the spread of the foreign game of billiards among the aristocratic youth and the prevalence of vice (mark the words) among the lower classes." Its Common Council wanted to fine every person five dollars who went fishing or hunting or who took recreation on Sunday. In 1818 it declared for a protective tariff. It fought equal rights and changed front on that in 1838. Its leaders' avarice brought on the "bread riots" and frightful suffering of 1837, and the watchword of scorn the poor man used then was "Millions to the landowner, but not a dollar for the unemployed hungry." It formed an alliance with aliens only when defeat stared it in the face in 1840.

All the time its leaders grew monstrously rich. It trafficked in bank charters and not a leader of importance flourished who did not have stock in these concerns when it denounced "the whole monied class of the country as dangerous to our liberties." It sold offices as early as 1845, it levied tribute through the police from the time of the early thirties, it entered into a water-supply deal that was so inadequate and dangerous that it brought on the great epidemics of yellow fever and cholera. It always plundered in its street cleaning. It raised salaries and taxes right and left, and its "Hunkers" of 1846 adopted the motto openly of "get all you can and keep all you can get." It had its famous Common Council of "Forty Thieves." It denounced "the imbecility of the administration of Abraham Lincoln." It created the "gangs" that used to be the terror of the city, and it brought convicts by the score from Blackwell's Island to vote at the polls. It worked the scheme of "regularity," in 1828, 1838, 1853, 1857 and numerous times after that to control nominations against the popular will. It always promised reform to get into office. Fernando Wood closed saloons on Sunday and disreputable places to make a hypocritical showing of reform. John Kelly went about, precisely as Lewis Nixon is going about today, saying that nominations should no more be dictated by a clique and that the office-holders must seek only the public good.

All the time Tammany went on stealing.

William Mooney, one of its founders, spent $1,000 of the city's money "for trifles for Mrs. Mooney." Many of its sachems were convicted of stealing. There were Hubbard and Broome at the start. Then came Naphtali Judah, who stole the secrets of the lottery and got rich. Noah and Ogden stole a $10,000 reward to which they were not entitled. Jacob Barker and his followers stole stocks and bonds by the million dollars' worth. Jacob Swartwout embezzled $1,222,705.69 from the Federal Government as Collector of the Port and fled. His brother Robert was an embezzler for something like $60,000. Jesse Hoyt and W. M. Price were also worthy forbears of Tweed, and so a list, amounting to hundreds, might be compiled. From first to last it has been one long story of plunder, plunder.

Nor is Lewis Nixon the first ship-builder at the head of Tammany. Jacob Barker, the leading ship-builder of the country at the time, raised $28,000 to build the first Tammany wigwam. It would not be complimentary to Mr. Nixon to dilate on Barker's career, for it was rich with stealings and his trial was one of the most momentous in New York's history, resulting in a conviction for colossal stealings. Then there was ship-builder Jacob A. Westervelt, "who was considered the very essence of respectability," and who was elected Mayor by Tammany. Under his rule corruption simply flaunted itself before the public. George Buckwalter was another Tammany ship-builder who in a $440,000 stock deal betrayed the city by selling city secrets. The Tammany of recent times need not be described.

Still the mystery of Nixon deepens.

Pass now to Croker, who is "working for his own pocket all the time." Illiterate, and enriched from his honest belief that the chief end of politics is to make all the money out of it that you can, he returns from his English home to find that he cannot even make the nominations that he desires. He finds the leaders in a riot of corruption and vice at which he stands aghast, but is compelled to keep silence. He is baffled, if not actually deposed by a gamblers' combine, and the organization under his nominal control meets crushing defeat. In his anger and mortification, with money enough to ensure him luxury for the rest of his days, he plays a part which ultimately may be compared to Samson pulling down the pillars. He calls in Lewis Nixon. One can fancy this man who once said, "I ain't no statesman" talking to the man he knew he could trust somewhat in this fashion:

"I want you to take the leadership of Tammany Hall and make it what it ought to be. Times have changed and leading Tammany isn't what it used to be. The job has grown past me. Great questions about which I know nothing confront the leader of Tammany. They ask me about taxation, finance, providing for the growth of the commerce of New York and such things, and I don't know how to answer. Tammany's leader should know about them. I don't; and it makes me timid, and a timid man has no business at the head of Tammany Hall. Besides, I'm none too well and I want a rest. I wish you would take it. I am absolutely out for good and you may count upon it that I shall never try to resume the leadership."

I say one may fancy such a conversation and I do not hesitate to add that no violence to facts would be done. Imagine, in addition, the retiring leader picturing to the ambitious young man the opportunities for a great career. Imagine all this in connection with the almost pathetic personal appeal, made to a man who has a fondness for political life, who has always had a praiseworthy desire to serve in public office, who has never failed in any of the remarkable things that he has undertaken, and with no time for reflection, and possibly the mystery about Nixon as the head of Tammany Hall may disappear. Down in his heart it is probable that within forty-eight hours he regretted the step that he had taken, for the work before him is an overwhelming task; but, having taken the helm and laid the course, partly from pride, partly from a grim determination to succeed, partly from the love of overcoming obstacles, partly because of the prizes of name and fame that great men from the earliest times have sought—he is resolved to fight it out and to try to make a new Tammany.

Will he succeed? It is betraying no secret to say that he has twenty-five of the forty votes of the Tammany Executive Committee under his full control but he has little in common with accepted Tammany theories of success. His own political theories also are somewhat at variance with those of Tammany.

e ha: himself a believer in ship ubsidies. Although he has denied that he is a protectionist, his own business never could have been built up except by a protectionist policy. An ardent supporter of the flag, he is at heart an expansionist, although he might give comfort to the anti-imperialists by opposing the details of the administration's Philippine programme. He has said that he is opposed to spoils in politics, but he meant that he was opposed to plundering the public treasury; and he really thinks that in order to secure responsible party government the victors at the polls should hold the offices. He believes in clean public officers. He believes that Tammany success means a job for the poor man and that t ought to mean that. He believes that the wisest public economy is to spend money judiciously. He believes that with the masses in public control the body politic would be in an ideal condition.

Can he reform Tammany? To the ordinary observer it would seem that he can do so only when the leopard changes his spots. No such man was ever engaged in work like this in politics in the United States.

Less than ten years ago a New Yorker, at dinner one day with the heads of the departments at Cramp's shipyard in Philadelphia, bitterly attacked Tammany Hall and Richard Croker. Nixon rallied to their defense and the thirty others present listened intently to the passage at arms. Finally Nixon said:

"If ever I go to New York I am going to identify myself openly with Tammany Hall and if Richard Croker ever should give up the leadership I should like nothing better than to take the job myself."

"All right," responded the other, "you make your reputation in that way and I'll make mine attacking Tammany Hall."

There the verbal duel ended. Nixon now is the head of Tammany Hall and the largest part of the professional reputation that has come to his antagonist of that day has come from attacking the same organization.

SOCIAL CLUBS FOR RAILROAD MEN

HOW THE GREATEST WORKINGMAN'S CLUB IN THE WORLD, THE NON-SECTARIAN RAILROAD DEPARTMENT OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION, DOES ITS HELPFUL WORK

BY

M. G. CUNNIFF

ONCE the "bucko" was the ideal railroad man. "Buckos" were plentiful in the army and navy also, and there e not many industrial managers yet who terfere with the right of American working- en "to go to hell if they want to," as a ngressman recently put it. But in an age ambitious competition so few workingmen, ldiers and sailors deliberately choose to egenerate—and so few are allowed to denerate very far and hold their places—that great movement already in successful operation to help these men to efficient living is, erhaps, the most important social betterment heme so far devised.

In a thousand manufacturing and railroad entres and army and navy posts, men have had to find outlet for their social instincts in dissipation: they had no clubs. In just such centres a great organized workingman's club with nearly fifty thousand members housed in commodious buildings scattered from Boston to San Francisco, is now combating the saloon and putting such club comforts as smoking-rooms, libraries, baths, sleeping places and lunch-rooms at the disposal of the men who need them most. It has been endowed by philanthropists, manufacturers and railroad officials, and supported in part by gifts and in part by membership fees, the payment of which removes the paternalistic element has killed so many betterment schemes. se verning also.

nstitution is composed of the R

Department of the Young Men's Christian Association in alliance with the Army and Navy Departments of the same parent body. Unlike the main Association, it is strictly non-sectarian. Men of all creeds assist it; men of all creeds, and of no creed, belong. Some railroad officials who dissent from the ideas of the essentially religious Association have contributed thousands to help along the essentially social Railroad Department. Roman Catholic priests, who could not be expected to sympathize with the Protestantism of the main organization, have heartily coöperated with the railroad branches. It is true that each branch holds religious services, but no member need attend unless he wishes. Each of the many branches is simply a comfortable loafing place where men may eat and sleep and smoke and amuse themselves when off duty.

A Boston brakeman, for example, a member of the Boston Branch, has a run on the Boston & Maine to Rotterdam Junction. He pulls in tired and grimy at six to go out again at midnight. Showing his card at the Rotterdam Junction Branch, he has a refreshing bath, secures a dinner at cost, smokes a pipe as he reads the evening paper, pays ten cents for a "sleep," rolls into a bed in the little dormitory, and is called to go out on his midnight run, after another "snack" perhaps, a clear-headed, efficient trainman. Or it may be that he spends the evening in games or in conversation with his mates, or in reading or writing. At any important railroad centre in the East and South, and at many in the West, his privileges would have been the same. In a city without such accommodations his temptations can be easily imagined: the building of the Rotterdam Junction Branch itself was formerly a saloon hotel, and tales from towns along the Chesapeake & Ohio of saloons driven out of business by the clubs, show clearly what the branches have replaced. One sturdy engineer, who has gone into the religious work of his branch, declares that whereas he formerly started his train with a corkscrew and an oath, he now starts it with a prayer. Leaving the religious phase entirely aside, however,—as a large proportion of the members do,—it requires no wide sweep of thought to see in an institution like this a potent force for social betterment.

The underlying idea has so attracted philanthropists that manufacturing companies have contributed to start such clubs at their mills, and Miss Helen Gould and others have provided them for army and navy posts. The Globe-Wernicke Company at Cincinnati built an addition to their factory containing baths and reading rooms, prepared a golf field outside, and are now erecting a gymnasium with a swimming pool. Class-rooms will also be added. The whole equipment has been turned over to be managed by the Railroad Branch of the Young Men's Christian Association. Mr. J. J. McHarg did the same thing with a similar plant for his miners at Helder, Montana. Miss Helen Gould has endowed a building just outside the Brooklyn Navy Yard which will have, in addition to the usual conveniences, a correspondence-room in which the sailors may write their letters, a bowling alley, a shooting gallery, and, oddly, a room for developing photographs. Members of the club may also have lockers there. Captain McCalla has contributed his share of the prize money for sinking Montojo's fleet in Manila harbor for a similar soldier's branch at Vallejo on San Francisco Bay. The Brooklyn Rapid Transit Company has fitted up for its street-car men a club house at Ridgwood that, with other advantages, has in one room a skeleton car for the instruction of new employees, just as most of the regular railroad branches have air-brakes as models to exhibit to classes of trainmen.

So great an impression, moreover, was made by the railroad branches on Prince Hilkoff, the Railroad Commissioner of Russia, when he inspected our railroad system, that he is now furthering their introduction on the Russian railroads. The Czar himself has expressed an interest in the movement and a desire to foster it.

On the New York Central alone there are fifteen of these branches, one of them a roomy brick building, to replace a picturesque establishment of four discarded cars which, side-tracked and connected with passageways, served the branch as a home for many years at Mott Haven; another, costing $225,000, an imposing structure on the corner of Madison Avenue and Forty-fifth Street, New York City. The Pennsylvania Railroad has twenty-four. Seven were established on the Santa Fé road in the last three years.

The Chesapeake and Ohio has nine. Other roads are almost as well equipped.

That the branches are used all day and through much of the night is clear from the fact that many of them are in small towns and yet have many members—in one town over ninety per cent. of the male inhabitants. In a place so small as Texarkana 1,100 men belong to the club. At Poplar Bluff, Mo., four hundred and fifty members joined in the first eight months.

Twenty years ago it was not uncommon for train crews to be dragged from saloons and sent half drunk on their runs. A "lay-over" too often meant a debauch. But with railroad improvements came a demand for clean-living, trustworthy men; railroads could not afford to have drinking men at the throttles of "flyers" or in control of trains expected to make close connections. It was dangerous. With the lifting of the standard came the need of aids to "keep straight" the men who desired to retain and increase their efficiency. And in the railroad branches of the Young Men's Christian Association—after the first had made a success at Cleveland—many clear-sighted railroad officials saw a means of helping their men help themselves. When it was demonstrated to them by the International Committee of the Young Men's Christian Association that regard for the comfort of their men would react to the advantage of the railroad service, one after another gave his coöperation to start branches and furnish them with buildings. Conversion came hard with some. They saw psalm-singing in the plan. But when men like President Tuttle, of the Boston and Maine, President Ingalls, of the Big Four, President Ramsey, of the Wabash, Mr. George J. Gould, head of the Gould system, President Baldwin, of the Long Island, President Cassatt, of the Pennsylvania, President Burt, of the Union Pacific—when men like these became convinced that they were helping their roads by helping the railroad branches they coöperated enthusiastically in the work. They speedily saw its common-sense practicality.

The railroad secretaries of the Young Men's Christian Association made definite propositions. The railroad officials were asked to contribute two-thirds the cost of a building and its equipment, provided the men first contributed one-third. Accommodations were to be provided according to the amount subscribed—smoking-rooms, lunch-rooms, libraries, class-rooms, dormitories, bowling alleys, recreation fields and so on. A membership fee was to be established. The ownership of the building was to be vested in the association and not in the railroad—this to secure independence. Absolute neutrality was to be maintained during strikes. When all this was understood official after official joined heartily in the movement. Their attitude might be summed up in the words of a well-known railroad president, who broke in when the religious, social and educational advantages were pointed out to him: "These are all right; but what this company wants is a good, comfortable place for our men to wash up, lounge about and take a nap in." And that is what they got.

The Boston & Maine Railroad Company was to contribute one-half of the $12,000 required to establish the Boston Branch. A canvassing committee, representing practically every department of the railroad service, secured the other half in no fewer than 1,718 subscriptions, ranging from ten cents to two hundred dollars. Sixty per cent. of the subscriptions did not exceed one dollar. This is typical: it shows how the coöperative element of the scheme has been maintained. In other instances the railroad officials have contributed an even larger share. In cases where the officials have grown to recognize these branches as permanent features of operation, the Young Men's Christian Association railroad secretaries make reports that cover entire systems, and the officials provide a building at every point where the number of railroad men, employees of express, telegraph and sleeping car companies, and men in the railroad mail service seems large enough to warrant it. That there are cases where the systems consider these clubs as permanent and necessary features is shown by the action of the receivers of a certain road in the reorganization period when expenses were being cut to a minimum. Each division superintendent was asked his opinion whether contributions to the branches should be stopped. They replied unanimously that whatever else was cut off, the branches should be saved, and the receivers maintained them through the bankruptcy period.

At the present time the branches exist on

seventy per cent. of the railroad systems of the United States and Canada and are encouraged and aided by practically all the important railroad men in the country. Mr. Cornelius Vanderbilt and Mr. George J. Gould have been deeply interested in establishing them on the roads under their control; one of the last acts of Mr. Huntington's life was to endow one on the Southern Pacific; and Mr. J. J. Hill is founding them on his Northern roads. Recently, Miss Helen Gould in her unobtrusive way has undertaken the work of supplying all the branches on the Missouri Pacific and other systems with emergency hospital equipments.

Colonel J. J. McCook, the eminent New York lawyer, is the president of the Railroad Department of the Young Men's Christian Association that supervises all this work—which looked at from every point of view is a colossal plan successfully furthering human fellowship.

MR. WILLIAMS AND THE CHEMICAL NATIONAL BANK

BY

EDWIN LEFEVRE

WHEN the Chemical Manufacturing Co. of New York was reorganized in 1844 as a "free bank" John David Wolfe invested $20,000 in 200 shares of the stock. When the estate of the late Catherine Lorillard Wolfe, his daughter, came to be settled, and the Chemical Bank stock she had inherited from her father was sold, it was figured that her estate had received in dividends, increased price of stock, etc., not less than $1,750,000.00 on the original investment of $20,000. This is the success of the bank and of its leader.

Time has dealt gently with a gentle man—George Gilbert Williams. His forehead shows the finger-prints of the years; but his cheeks are rosy, and transparent-skinned, like the cheeks of a child. And so it comes that people respect and admire the successful President of the Chemical National Bank, and love the youthful cheerfulness of the man. It is much to have been the head of such an institution for more than a generation. It is more to have been the head of it and to have kept a spirit unembittered by the disillusionments of life. The strongest motives that govern human action are indubitably love and greed. Mr. Williams must necessarily have met more greed-impelled men than the average. But he has persistently believed love to be the stronger force. A man asked him once what he considered the first essential of success and Mr. Williams without a moment's hesitation answered, very quietly, as is his wont, and very firmly because he was so certain of it: "The fear of God." It helps to understand the success of the man, the enviable reputation of the banker.

George Gilbert Williams comes of a highly distinguished family. Among his ancestors are Roger Williams, the founder of Rhode Island, and William Williams, one of the signers of the Declaration of Independence. There were Williamses who fell in the Colonial wars and during the Revolution; one was killed at Bunker Hill; another at Lexington. Wherever the fight for political freedom or for principles was fiercest, there was sure to be a member of the family. Mr. Williams was born in East Haddam, Conn., in 1826. His father, Datus Williams, was a famous physician, and a friend of the family was John Q. Jones, the then cashier of the Chemical Bank, through whose influence young Williams entered the bank, as a boy of fifteen. At the age of twenty he had risen by his diligence and aptness to be paying teller—a remarkable feat. He was compelled to leave the bank when twenty-two, owing to an injury to his knee, which invalided him for ten months; but on his recovery, he returned to his duties. There is not an employee of the bank today, from the

: t st, who will not tell you
u a deep relish obviously born of sincere
rsonal attachment, how some people sixty
ars ago didn't think Mr. Williams would
ve very long. In 1855 Mr. Williams was
lected cashier. After John Q. Jones's death
1878, Mr. Williams was unanimously
ected president. He had been virtually the
executive head of the bank for some time
revious.

For more than a half-century Mr. Williams
as walked to his bank from his city residence
or, in the summer, from the ferry. Every
norning he has walked his good two or three
iles down Broadway, in fine weather and in
ormy. His step is springy enough, but his
houlders have the student's stoop. His eyes
rouble him at times and he shades them with
old-fashioned goggles which, apart from the
pleasing good-natured dignity of his face, make
him somewhat conspicuous in the hurrying
hrong. More than one hat is raised as he
asses by, for no genuine New Yorker fails to
ecognize him. This regular exercise and his
abits of regularity in everything have done
wonders for him in health and in business.
: spends a part of the summer at the
iental Hotel, Manhattan Beach, where a
oom is always reserved for him, and every
norning at six he takes his dip in the ocean.
Not so very long ago he helped to save a
iend from drowning.

At the bank the clerks always know that
r. Williams has gone home for the day when
s desk is cleared of its daily accumulation of
tters and papers. No matter how late the
ur, if the desk is not "cleaned up" they
ow that Mr. Williams is out on business
d he will be sure to return. For many
ars Mr. Williams had no real assistant.
e vice-presidency was regarded as a sort of
norary position. But he has now a valued
lper in William H. Porter, the present
e-president.

When about to be interviewed by a news-
per man the other day Mr. Williams placed
s hand on Mr. Porter's shoulders, and said
th a quizzical smile: "See what you will
ve to go through some day."

"Not for many, many years," answered Mr.
rter, with unmistakable sincerity.

"Well," said Mr. Williams, very gently, "I
m seventy-six, you know."

The peculiar position occupied by the Chemical National Bank is not to be explained on the score of financial strength alone. It is indisputably the best-known bank in the United States. What may be called the practical financiers of Wall Street are apt to allude to it as old-fashioned. But they invariably end with: "But, after all, there is only one Chemical Bank. We need it, just as an example." The nearest approach to criticism of Mr. Williams that I ever heard came from a "stock market banker" who said: "He is too conservative." And, after a pause: "God bless him!"

For many years the Chemical had larger deposits than any other bank in the United States. It has since been exceeded in this respect usually by some of the great interest-paying Wall Street banks, whose directors control the richest corporations in the country. No bank has a larger line of non-interest-bearing deposits and none has ever excelled it in its high reputation. There is no conceivable combination of circumstances that could shake the stability of the institution. Financial storms may rage, one bank after another may totter, failure after failure be announced; but no depositor of the Chemical will lose sleep. In point of fact, the deposits of the bank invariably increase during panics, an anomaly explainable only on the ground that people instinctively flock to it for greater safety. Now, the bank offers no "special inducements" to clients, it pays no interest whatever on deposits large or small; it allows none on the balances of out-of-town banks. But it is no exaggeration to say that merely to be known as a depositor in the Chemical National Bank tends to give an individual or a corporation a certain standing in the eyes of the community. In speaking of it people are apt to use a curious solemnity, a *solemness* of speech, as though speaking of a high-minded man whose example is to be emulated and whose good opinion is to be treasured. And that is because Mr. Williams is the president, because his character is the character of the bank. His ideals as a Christian and a gentleman have never clashed with his ideals as a business man. A stranger entering the bank for the first time could not fail to be impre
by the very atmosphere of the place.

In many respects Mr. Williams is
but always in the best sen

often misapplied word He reminds one of the old-time country banker, who not only was the business confidant of his fellow-townsmen but their personal friend and cherished counselor as well. He is the most trusting of men, and yet he is the most conservative banker in America; the most conservative banker and yet one of the most successful. He likes to see people prosper, but he has no sympathy with those who would get rich overnight. He knows how stability goes hand in hand with long-continued effort. He takes a real interest in his clients. More than once he has persuaded borrowers to content themselves with less than they have asked for, believing that temperance is good in all things, so that people go to him not only for money but for sound advice

He has time and again been entrusted with the management of estates left by departed friends who, knowing him intimately, trusted him absolutely; among others the estates of John Q. Jones, whom he succeeded as president, and his brother, Joshua Jones; Robert L. Stuart and his wife Mary Stuart; Louis Hammersley; Wilson G. Hunt, a far-sighted man who foresaw the dangers of silver twenty years before there was such a thing as Bryanism and who turned his odd pennies into gold pieces, so that Mr. Williams found among his friend's effects some $800,000 in gold. He is also one of the trustees and vice-president of the United States Life Insurance Company, a director of the Fidelity and Casualty Company and of the Union Trust Company; a governor and vice-president of the Lying-in Hospital, treasurer of the Institution for the Savings of Merchants' Clerks, treasurer of St. Bartholomew's Church, in the parish work of which he is deeply interested, as he is also in the Orphans' Home and Asylum of the Protestant Episcopal Church, which was liberally endowed by his friend John Q. Jones. He was president of the Clearing House. He often tells of the first meeting of that body, when he and the late Frederick D. Tappen, of the Gallatin National, were present, both being at the time settling clerks for their respective banks. He has been twice president of the Clearing House Association, and as such in 1893 appointed the famous Loan Committee, which rendered such sterling service to the financial community, and as president of the Clearing House was *ex-officio* a member of that committee.

One of his maxims is: "Politeness pays." He has impressed upon all the employees of the Chemical National Bank that next to absolute integrity politeness is of utmost importance. "Too often," he has said, "the man who wears a shabby coat is subjected to discourtesy; but I have observed that many a tattered garment hides a package of bonds and that gorgeous clothing does not always cover a millionaire. It is the invariable rule of the Chemical National Bank that every employee, from the humblest clerk to the highest official, shall be courteous to everyone. A grain of politeness saves a ton of correction. No institution is too important to ignore the laws of courtesy." "If I could speak twenty languages, I'd preach politeness in them all. I speak in praise of politeness out of the experience of fifty-nine years in the banking business."

I once asked Mr. Williams point-blank, to what he attributed his own success in life. After a moment of pensiveness Mr. Williams said, very earnestly: "To faithfulness—faithfulness to my every duty." And, after a pause, this oldest banker in New York City added, with a certain wistfulness: "I wish you could impress that on the young men."

The history of the Chemical National Bank is, it must be confessed, a trifle monotonous, being but a record of steadily increasing strength, growing out of its sound and intelligent methods. It is a link between the past and the present as no other bank in the city. Its early chronicles, showing how its early governors builded, will show also that its prosperity was inevitable.

In 1823 the Legislature passed an act incorporating the New York Chemical Manufacturing Company for the purpose of "manufacturing blue vitriol, alum, oil of vitriol, aqua fortis, nitric acid, muriatic acid, alcohol, tartar emetic, refined camphor, saltpetre, borax, copperas, corrosive sublimate, calomel and other drugs, medicines, paints and dyers' supplies." In April, 1824, an act was passed amending the charter and granting to the company banking privileges, but stipulating that the manufacture of chemicals should not be abandoned. The charter was for twenty years. The capital stock was $500,000; the

surplus, nothing. P. B. Melick was the president, and the company's factory was located on Thirty-first street near the North River. The ground was sold to the New York Central years afterward. In 1829 the surplus was $4,000. John Mason, father-in-law of the Jones brothers, became the president in 1833, being succeeded in 1839 by Isaac Jones. John Q. Jones became the cashier at the same time.

When the company's charter expired in 1844 the State refused to renew it owing to a popular prejudice which had arisen against manufacturing and other companies with banking privileges. The only one that survives to this day is the Manhattan Company, because its charter was perpetual. Although its chief business is banking, it still has to maintain its original business as a water company.

Efforts were made to reorganize the Chemical Manufacturing Company as a bank; but bank creating in 1844 was not an easy matter. However, one day Peter Goelet and Cornelius Van Schaick Roosevelt — the grandfather of Theodore Roosevelt—undertook to raise the money, and in two hours they had secured the necessary subscriptions. The company was reorganized as a "free bank"—the Chemical Bank—in 1844, with a capital of $300,000. By the end of the year they had a surplus of $25,000. The chief spirits in it were C. V. S. Roosevelt, Peter Goelet, Robert Goelet, Joseph Sampson, Robert McCoskry and John David Wolfe.

John Q. Jones was the first president of the bank. From the start, the bank's policy was to conduct a careful and conservative business. The men who were influential in its success were men who had risen to great wealth by the exercise of qualities rarer in these "hustling" days than then. They went slowly because they would go surely; and because of it, they went far. In the early fifties, when the bank was already a pronounced success, the coterie of Goelets, Roosevelt and the others were described as being "worthy, wealthy citizens, devoted to business, piety, charity and good works, all believing firmly in the Christian religion, the Ten Commandments, John Q. Jones and the Chemical Bank."

The bank prospered. Its organizers decided not to pay dividends, but to let the profits accumulate until there should be a substantial surplus. For five years they went into the reserve fund. By that time it was felt that the bank was so strong that dividends should in justice to the stockholders be declared, and they began at the rate of twelve per cent. per annum. The rate increased gradually until 1888 when 150 per cent. yearly was paid. This dividend rate has continued ever since, notwithstanding which the surplus reserve has steadily grown. It explains why on the rare occasions when a share or two are sold at auction to settle some estate the $100 shares bring over $4,000.

The bank started in 216 Broadway, next door to Barnum's Museum. In 1850 it removed to its present location on Broadway near Chambers Street. Mr. Williams became its cashier in 1855. In 1857 it gained national fame as being the only bank that did not suspend specie payments. There was an old director whose invariable speech at the directors' meetings had been: "Keep strong! Keep strong!" And the Chemical Bank was strong. Its capital had remained at $300,000 and it had a surplus reserve of almost twice that amount. At the meetings of the other bankers that discussed the panic, Mr. Jones persistently voted against the suspension of specie payments. The other banks, however, were not in the Chemical's strong position, and on October 14th, 1857, all suspended gold payments excepting the Chemical, whose officers announced their determination not to suspend under any circumstances but to liquidate, if necessary, their entire indebtedness in specie. Of course, the bank suffered a brief run. A rich merchant of the time went in apprehension to draw some gold which he needed but wasn't sure of getting; but, as he afterwards wrote, he found there "burly porters, sweating like Sisyphus, who were rolling up from some lower region casks of gold." In a few days its specie actually begun to increase, many people depositing their gold for safety in the bank they could trust—the one bank in the Union that did not suspend specie payments in 1857. The bank received the checks of other banks on deposit. Checks on these deposits were payable in currency only, thus preserving the specie value of the old deposits. Always its first thought was for the safety of its depositors.

The Chemical Bank again distinguished itself three years later. On November 21,

1860, the clearing-house banks entered into an agreement for the "extension of loans and discounts and for the purposes of facilitating the settlement of exchanges between the banks." The directors of the Chemical Bank, however, declined to put their gold reserve at the disposal of the General Banking Association, because their first duty was toward their depositors. They were willing to agree to what related to the settlement of exchanges at the clearing house by means of loan certificates and to do all they could to relieve the situation; but not at the expense of their depositors.

The Clearing House passed resolutions refusing to extend to the bank clearing-house privileges while expressing "high personal esteem" for the bank's officials. The Chemical's action was bitterly assailed by its weaker brethren as "selfish" and "devoid of public spirit," etc. As a matter of fact it did much to help the situation. On October 6th, its loans were $1,945,785. On November 17th, at the height of the panic they were $2,116,352 showing that depositors had confidence in the management, which was extending loans in time of need.

In the *Herald* of December 7, 1860, the elder Bennett wrote of the "foolish antagonism" toward the Chemical Bank on the part of the other banks. A little later the *Herald* commented upon "the great pluck of the banks —pluck to make war upon the Chemical Bank which is the only specie-paying institution in the country, or soon will be." There is a tradition in the Chemical Bank that the old director from whose lips his brother directors had never heard but: "Keep strong! Keep strong!" broke his rule when the Clearing House suspended the bank, and quoted, genially:

"Banished the house! What's banished but set free
From daily contact with the things I loathe?"

The bank's charter was for twenty-one years and in 1865 it was converted into the Chemical National Bank. The original capital of $300,000, the management, the policy, all continued the same.

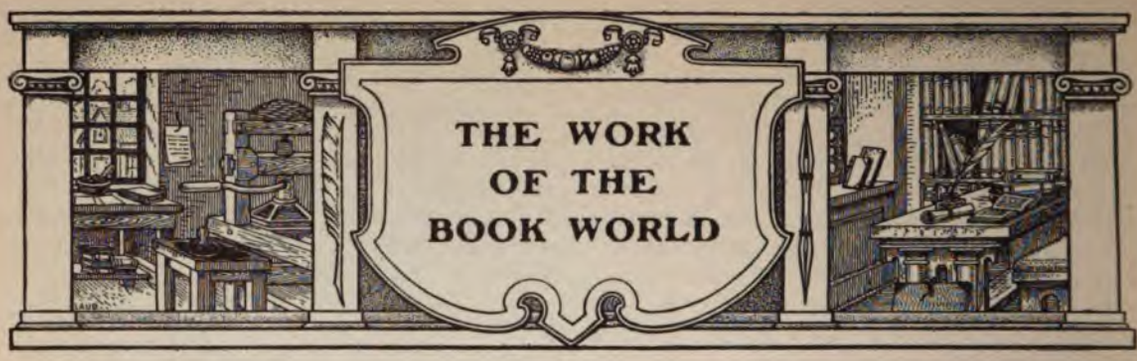
The reputation of the bank for solidity and business wisdom increased steadily. Its position was so firmly established in the eyes of the community that for the last thirty years the Chemical National Bank has been the Chemical National Bank. When that is said all is told. The descendants of the men who founded the institution hold the controlling interest in the bank's stock to this day. W. Emlen Roosevelt is a director. So was his father, James A. Roosevelt, before him, and his grandfather, C. V. S. Roosevelt, who helped to found the bank. Mr. Robert Walton Goelet is also a director, as his father was. His grandfather was never a director but as one of the founders and principal stockholders he had much to do with its policy. Its depositors have included not only the old families but the principal corporations and merchants in this city. A. T. Stewart, Commodore Vanderbilt, James Lenox and other financial lights of a former generation were among them. James Gordon Bennett paid $200,000 for the ground on which the old *Herald* building stood by a check on the Chemical Bank. Today, one of its most famous depositors is Mrs. Hetty Green, the richest woman in America and one of the shrewdest in the world.

The gross deposits of the Chemical Bank rose from $600,000 in 1844 to $1,156,000 in 1857, $3,241,000 in 1861, $6,002,000 in 1872, $11,400,000 in 1878—the year that Mr. Williams became its president in name as he had been in fact—$23,280,000 in 1885 and $29,500,000 in 1893. Its stock is by far the highest priced of all bank stocks in this country.

Last December its total deposits amounted to $36,489,830, and its cash surplus reached $6,524,768. No better evidence could be given of the bank's solid strength than this showing of cash in hand amounting to more than one-sixth of total deposits. As a matter of fact one-tenth would argue solidity.

It is not in the quantity of millions that this bank is preëminent but, as has been shown, in the position it occupies in the public esteem and the respect of the financial world. It is not in the maelstrom of turbulent finance as the great Wall Street banks are; but it has the cream of the commercial business of the city. Its staunchest clients are houses in and out of New York which are not only financially sound but which enjoy the very highest reputation in every respect. It is characteristic.

"Keep strong! Keep strong!" said the old director, two generations ago. And the bank has kept strong.



A SHORT GUIDE TO NEW BOOKS

CONTEMPORARY PROBLEMS

The group of volumes here considered,—diverse as they are, and two written by Englishmen—directly or indirectly encourage optimistic views of American democracy. Whether academic prophecies or practical expositions of fact they all contain cheer for those who believe devoutly in our institutions. Hopefulness is in them all.

Mr. H. G. WELLS, for example, forecasting in "Anticipations" (Harper. $1.80 net) the world a century hence, basing his prophecies on present conditions and tendencies, outlines a state of society, a system of machinery, a condition of human thought, the germs of which are more plentiful or more advanced in the United States than elsewhere. Rather personal than scientific, Mr. Wells's opinions on the future complexion of the world, on the household, the locomotion, the war and the religion, are dynamic enough to compel attention, but convincing only in their general lines. The large element of human inertia is too little regarded. Yet it is by such courageous individual books as this that the inertia is overcome, and Mr. Wells has done a service in writing it.——Mr. ARCHIBALD R. COLQUHOUN similarly observes and prophesies, and his ripe conclusions also stimulate. "The Mastery of the Pacific" (Macmillan. $4. net) is the fruit of this English traveler's experience in the lands that border on the Pacific, east and west. It is a study of Pacific colonial conditions. Full of fascinating interest and solid instruction, it contains a comprehensive treatment of the Philippines which to us is of immediate importance. No stay-at-home American can be familiar with Philippine problems without knowing the facts that Mr. Colquhoun has garnered. In the main agreeing with Judge Taft regarding the natives, he points out the novelty of our colonial methods and hopes, and exposes their pitfalls; but he also shows our peculiarly advantageous position in relation to the great Pacific Empire-to-be. It is a thoughtful book by a well-equipped observer.——Closely related to Mr. Wells's line of thought is "The Basis of Social Relations" (Putnam. $1.40), by the late Professor DANIEL G. BRINTON, and closely related to Mr. Colquhoun's, is Professor A. B. HART'S "Foundations of American Foreign Policy"(Macmillan. $1.50 net.). Professor Brinton expounds clearly and interestingly the tentative science of Ethnic Psychology, developing the thesis that each nation or each community has a mind composed of all the individual minds in the group and yet different from any one of them. Obviously not yet a positive science, Ethnic Psychology is a logical working out of the theory of evolution; and thus, with all it gaps, it points toward the truth. Here again, in a very suggestive volume, the democratic ideal appears as making toward healthfulness and progress.——Professor Hart in his republished papers sketches briefly and in elementary fashion the historical incidents that show what our foreign policy has been. The book is valuable as a sketchy summary of these, and also as containing a good bibliography of the subject; but when Professor Hart draws personal inferences from his facts and ventures on dogmatic opinions he loses authority—as under such circumstances a historian must—and invites disagreement. His facts prove the nation a lusty World-Power; his arguments do not always convince.——Among the lesser problems which we are courageously attacking the trust question is treated by Mr. JOHN R. DOS PASSOS in "Commercial Trusts" (Putnam. $1). The book is a formal argument delivered before the Industrial Commission. Oratorical, suggesting an attorney's plea rather than an unbiased thinker's reasoning, it advocates the application of *laissez faire* to the whole Trust difficulty.——"The Social Evil" (Putnam. $1.25), on the other hand, is a calm statement of the history of the problem, the various methods of dealing with it throughout the world, and suggestions for controlling it, more particu-

Anticipations

The Mastery of the Pacific

The Basis of Social Relations

The Foundations of American Foreign Policy

Commercial Trusts

The Social Evil

larly in New York City. It is the report of the Committee of Fifteen, a wise and helpful document.——Other state and municipal questions are considered in "Municipal Engineering and Sanitation" (Macmillan. $1.50 net), by Mr. M. N. BAKER, assisted by Mrs. BAKER, who wrote several chapters, and in "The Care of Destitute, Neglected and Delinquent Children" (Macmillan. $1), by Mr. HOMER FOLKS, Commissioner of Public Charities of the City of New York. The former explains in a general, non-technical way the economy of cities, from pavements and parks to the water and milk and meat supply. It endeavors to give to the ordinary reader an idea of city conditions, and to either private or administrative, or even legislative reformers, suggestions for making improvements. A wide field is so successfully covered that, although the writer seems not to have thought of it, the book, beside being of general interest, would make an excellent text-book in civics for high schools.——Mr. Folks's book has a narrower interest. It covers exhaustively the methods of caring for unfortunate children in various States and cities, by both public and private initiative. It points out, also, the advantages and disadvantages of the various methods.

Municipal Engineering and Sanitation

The Care of Destitute, Neglected and Delinquent Children

FICTION.

Mrs. EDITH WHARTON'S "The Valley of Decision" (Scribner. 2 vols. $2) is a distinguished book—a vast canvas gorgeously adorned with the many-colored, ceremonious, semi-feudal life of eighteenth century Italy. Odo—neglected child, then heir-presumptive to a ducal throne, and finally Duke of Pianura—faces his problems with the reflective doubt of a Hamlet, and in the great tide of affairs that ultimately sweeps the French Revolution to his palace doors, never really finds his feet—a gelatinous figure after all. But he passes through scenes and ceremonies that Mrs. Wharton describes with patient detail and a delightfully scrupulous phrasing. The historical back-ground for brilliancy of coloring and largeness of conception is unsurpassed in recent fiction.——"Wistons" (Scribner. $1.50) by MILES AMBER, a new English writer, is strong where Mrs. Wharton's book is weak. Narrow and not especially vivid in its English background it presents a group of characters sharply outlined. Three generations of the household at Wistons develop in the odd directions that heredity commands, and each generation and each character is thoroughly individualized. It is a very uncommon book. The author must be a woman; a man could hardly analyze Rhoda and Esther so subtly.

The Valley of Decision

Wistons

——A powerful English historical romance is "The House Divided" (Harper. $1.35 net), by Mr. H. B. MARRIOTT-WATSON, the strongest work he has done since "Galloping Dick." A robust plot abounds in strenuous incidents. The Earl of Devril, *dour*, brutal, masterful, is such a figure as Stevenson might have drawn, and young Mallory, daring, handsome, careless, is far too gallant a hero to die so uselessly. Almost as well conceived are the two women, Lady Charlotte Raven and Lady Cytheris, who complicate the fight of young Mallory for his supposed inheritance. It is a virile book.——Mr. JUSTIN HUNTLEY MCCARTHY on the other hand, fails to make a successful novel of "If I Were King" (Russell, $1.50), adapted from the play of that name. The atmosphere of the theatre clings about it, and the character of François Villon lacks the charm it possesses in the play.——A romance, distinguished by no especial ingenuity of plot or excellence of manner, readable and no more, is Mr. CLINTON SCOLLARD'S "The Cloistering of Lady Ursula" (Page. $1.50). It tells of Italian feuds in the days of the early Renaissance, relating how Andrea degli Uccelli wins through countless sword-blades to happiness with his Ursula. The accessories are familiar to any reader of current romances.——Coming closer to life we have in Mr. E. W. HORNUNG'S "At Large" (Scribner $1.50), a vigorous and interesting story, which seems, however, to be the rather hasty work of a younger man than the creator of Raffles and Bunny. Ryan, the outlaw-turned-gentleman, is one of the steel-nerved men so convincingly typified in Raffles.——Mr. RICHARD HARDING DAVIS'S "In the Fog" (Russell. $1.50), is a "surprise" detective story, interesting because Mr. Davis could be nothing else, but trivial. A clever little tale, it falls short of Mr. Davis's possibilities.

The House Divided

If I were King

The Cloistering of Lady Ursula

At Large

In the Fog

Among the few books which try to give a picture of the world about us Mr. ARTHUR MORRISON'S novel, "When Love Flies Out o' the Window" (Appleton. $1.50), tells a story of everyday life among the ambitious Bohemians of literature and drama. The life of the homeless girl whom a young novelist saves and marries in Paris and who, in the end, gives him success and happiness in America, is filled with human nature and real incident.——"The Magic Wheel" (Lippincott. $1.50), by JOHN STRANGE WINTER, is much less successful. It tells of clairvoyants, whose visions result in the rescue of a sailor shipwrecked on a desert island. In fairly interesting fashion it details the experiences of the sailor's wife, an imaginative woman, in the hands of people with "second sight."——In "Hester Blair" (Clark.

When Love Flies Out o' the Window

The Magic Wheel

$1.50), by Mr. WILLIAM H. CARSON, a long array of untrue people and melodramatic situations, set forth in a commonplace, wretchedly constructed style, is relieved by Slack Dorkin, one of the simplest and best creations of rural fiction.——"Shacklett" (Appleton. $1.50), by Mr. WALTER BARR, on the contrary, recounts the rise of a real man in Illinois and Colorado politics; and shows some interesting sides of political life in the West. It is serious work deserving of commendation.——Also commendable is Mr. JAMES HUNEKER'S "Melomaniacs" (Scribner. $1.50) in which the writer extends his well-known critical ability from music to musical folk. A cynical, satirical, though always interesting, collection of stories is the result. People who know anything of the artistic Bohemia will enjoy reading these real yet fantastic tales.——An historical tale is "The Siege of Lady Resolute," (Harper. $1.50.) by Mr. HARRIS DICKSON, as interesting and improbable as most recent books of that class. While the characters are—in a measure—human, the action, which runs from the France of Louis XIV. to Louisiana and back, is filled with unformed climaxes and half-constructed motifs.——Mr. FRANK STOCKTON also ventures into bloody scenes; and yet "Kate Bonnet" (Appleton. $1.50.), though in a new field, is of a piece with Mr. Stockton's earlier whimsical humor. The adventures of the sugar planter who turns pirate, of his beautiful daughter and her lovers, of remarkable pirates and marooned victims, are all told in Mr. Stockton's best story-telling vein. Every chapter contains some new and quaint incident that no one else would think of and no one else could write.——In "Audrey" (Houghton, Mifflin. $1.50.) Miss MARY JOHNSTON has made a distinct advance over "To Have and to Hold." There is a greater restraint, her excellent style flows even more smoothly and her descriptions are not surpassed by any living novelist among us. The story is of Colonial Virginia, which she knows from soil to sky—at the time when life was easiest, richest, most magnificent and when class distinctions were as great as in any Old World aristocracy. There is this charming background, and the book, though not lacking in adventure, is a tale of the manners and the life of a people. Stately old Colonel Byrd and his daughter Evelyn are alive and Mr. Marmaduke Howard is in attendance on them at the mimic court of Old Williamsburg. The drunken preacher, Darden, brings up Audrey, into whose simple life come love and hate, passion and tragedy. The tale is very real.

Hester Blair

Shacklett

Melomaniacs

The Siege of Lady Resolute

Kate Bonnet

Audrey

BIOGRAPHY

Mr. OLIPHANT SMEATON traces in "The Medici" (Scribner. $1.25) the relations of the great Medici family to the Italian Renaissance. Showing in these strange Florentines the union of a contemptible fondness for intrigue with a high, disinterested love of art, he gives an interesting picture that at the same time is a scholarly study.——"Edward Plantagenet" (Putnam. $1.35 net), by Mr. EDWARD JENKS, is a carefully thought out history of the making of England's common law by the King whom Mr. Jenks calls "the English Justinian." A learned account of Edward I as soldier, administrator and law-giver, the book is enlivened by many vivid pictures suggestive of Macaulay. The passages on the development of the common law are excellent and concise. The illustrations are plentiful.——Mr. WILLIAM FARRAND LIVINGSTON develops the story of Israel Putnam's life with the same antiquarian interest that Mr. Jenks shows, and gives a trustworthy picture of the sturdy, illiterate colonial soldier (Putnam. $1.35), but following a practice all too common, he overloads his history with original documents. Many are interesting, and most throw new light on Revolutionary affairs; but, after all, a historian should synthesize and recount, and not give a series of copious quotations. Apart, however, from his somewhat fatiguing method, Mr. Livingston has successfully pictured an inspiring national hero.——Of the two critical studies at hand "Henrik Ibsen" (McClurg. $1.50), by Mr. HENRIK JAEGER, translated by Mr. WILLIAM MORTON PAYNE, secured some years ago in a first edition a cordial acceptance, and it remains now only to say that with Mr. Payne's additional chapter covering Ibsen's later works, the volume is a comprehensive study of Ibsen, not only as a man, but as a force in literature. In brief, the book is mainly a sound critical introduction to Ibsen's work, interpreting with commendable judgment.——"Newman" (Longmans. $1.10 net), by Rev. ALEXANDER WHYTE, is shallower, for its two addresses hardly more than indicate the personal attitude toward Newman and his writings of a man who disagreed with him on grounds that do not appeal to the world at large. There is some good criticism however; and at least a third of the book is devoted to selections from Newman's various books and papers. The book can be recommended only to those who know Newman somewhat and wish to get a new view of him.——"Cecil Rhodes: A study of a Career" (Harper. $5 net) by Mr. HOWARD HENSMAN is not an apology for Mr. Rhodes, yet it is the sort of ac-

The Medici

Edward Plantagenet

Israel Putnam

Henrik Ibsen

Newman

count one might expect a party adherent, endeavoring to be fair, would write of his leader. It cannot, then, be considered as a history either of Mr. Rhodes or of South African affairs. As a partisan narrative, however, of Mr. Rhodes' life, of his rise to power, of his building up of Rhodesia, of his connection with the Jameson raid and the Boer war, it has the merit of presenting its subject at close range and concretely. We may not meet the real Cecil Rhodes, but we see a certain Cecil Rhodes plainly, and even intimately. The book also gives an interesting sketch of South African politics.——With a more widely intelligible sympathy than Mr. Hensman's for Mr. Rhodes, Mr. CHARLES TOWNSEND COPELAND, in "Edwin Booth" (Small, Maynard. 75 cents), presents a brief but excellent biography of our greatest actor. He so pictures Booth as to perpetuate the fame of an essentially fleeting kind of artistic accomplishment.——A far different kind of hero is Charles Robinson of Kansas, of whom Professor FRANK W. BLACKMAR writes in his stirring biography (Crane, Topeka.)—a State-builder in the ante-bellum days when Kansas was "staked off to settle a great national question in its own way." Charles Robinson led the Free State forces, and became first Governor of the new commonwealth. The story of his strenuous career is told by Professor Blackmar with some partisanship, but with vigorous straightforwardness and no lack of vividness.——Neither biography nor critical study, but bald journalism, is "Millionaires and Kings of Enterprise" (Lippincott. $6 net), by Mr. JAMES BURNLEY. It is a very badly written collection of sketches of American millionaires, valuable only for its information regarding these men and their methods of acquiring wealth and power.

Cecil Rhodes

Edwin Booth

Charles Robinson

Millionaires and Kings of Enterprise

JUVENILE BOOKS.

"Alice's Adventures in Wonderland" (Harper. $3 net) is a richly decorated edition of LEWIS CARROLL's classic. We regret that Peter Newell in his illustrations has given Alice a characteristically vapid face, for in other respects his drawings are whimsically in keeping with the spirit of the book. Apart from this flaw the volume is an ideal gift book—not merely, of course, for children. Among purely juvenile books "The Wouldbe Goods" by E. NESBIT (Harper. $1.50) is an excellent story full of freshness and humor, wholly narrative, yet possessing in some degree the tone of "The Golden Age." The three new Henty books "With Roberts to Pretoria," "At the Point of the Bayonet" and "To Herat and Cabul" (Scribner. $1.50 net, each), are after their kind, a little stiff, but thrilling enough to be good entertainment. "The Outlaws of Horseshoe Hole," by FRANCIS HILL (Scribner. $1 net), is a tale of a young hero captured by desperadoes, exciting but somewhat too violent to be commendable. "Lem," by NOAH BROOKS (Scribner. $1 net), is a pleasant story of New England boy-life, interesting and wholesome.

MISCELLANEOUS

Much patiently curious study of the lore of cats, together with a devotion to actual "little lions, small and dainty sweet," has fitted Miss AGNES REPPLIER to be a very cat-apostle; and in "The Fireside Sphinx" (Houghton, Mifflin. $2. net) her deft pen pleasantly records the life that cats have led from the dawn of history to the present. The book will delight even those who have no liking for cats.

The Fireside Sphinx

Here Professor W. A. DUNNING of Columbia University traces in incisive style the formulating of political theories in Greece, in Rome, and in the Europe of more modern times. The book forms a scholarly history of political theory, showing concisely the inter-relation of nationality with the growth of political ideas. The chapters on the work of Aristotle and Machiavelli are particularly interesting. (Macmillan. $2.50.)

Political Theories Ancient and Modern

Mr. A. ELSON's historical sketch, though it can scarcely be called critical, outlines and defines in interesting and popular fashion the various schools of operatic composition in chronological order. It is valuable as a guide-book to the development of operatic forms. (Page. $1.50.)

Critical History of Opera

Dr. MORTON GRINNELL entertainingly shows the habits and home life of certain wild animals and birds of New England in a volume of stories (Stokes. $1.50). Interesting and unpretentious, the tales of humanized wild things show a rare knowledge of bird and animal traits.

Neighbors of Field, Wood and Stream

To her "World Beautiful" series, Miss LILLIAN WHITING has added "The World Beautiful in Books." It is made up, like the others, of brief appreciations and quotations of fine passages in prose and verse, illustrative of beauty in various literary phases. (Houghton, Mifflin. $1).

The World Beautiful in Books

"Thoughts for Everyday Living" (Scribner. $1) is a collection of short paragraphs taken from the late Dr. MALTBIE D. BABCOCK's sermons, his contributions to religious papers, his letters and notes from his extemporaneous talks. They are the interesting and helpful comment of a

Thoughts for Everyday Living

ughtful and much lamented man upon the roblems of everyday life.

China in Convulsion

Dr. ARTHUR H. SMITH is the best authority on Chinese life; and his history (Revell. 2 vols. $5), of the siege of Pekin is the best book on the subject. It is a minute account of the siege and a vivid description of the relief of the Legation, of the condition in Pekin and of the different provinces after the siege. The most valuable part of it is the history of the anti-foreign movement and the causes that inevitably brought it about. It is a valuable contribution to an understanding of the Chinese point of view, without which there can be no clear appreciation of what seemed to be a wanton outbreak of barbarism. Dr. Smith's long residence in China, and his intimate knowledge of Chinese life, give him an insight that perhaps no other writer has.

ANNOUNCEMENTS

The following books, recently issued by Doubleday, Page & Company, are here noted:

"The Mystery of the Sea," by Bram Stoker, a new mystery story by the author of "Dracula." ($1.50.)

"The Misdemeanors of Nancy," by Eleanor Hoyt, a story of a modern American girl, illustrated by Penrhyn Stanlaws. ($1.50.)

"The Coast of Freedom," by Adèle Marie Shaw, a tale of Cotton Mather and the witchcraft craze. ($1.50.)

"The Empire of Business," by Andrew Carnegie. ($3 net.)

"The Variorum and Definitive Edition of the Complete Works of Edward FitzGerald," edited by George Bentham. (Prices on application.)

THE MONTH'S MOST POPULAR BOOKS

REPORTS from booksellers in Cleveland, Louisville, Rochester, New York, Detroit, Washington, Toronto, Cincinnati, Pittsburg, Philadelphia, Boston, Kansas City, St. Paul, Dallas, and St. Louis, and from librarians in Chicago, Brooklyn, Buffalo, Jersey City, Bridgeport, Springfield, New York, Detroit, Cleveland, Hartford, Cincinnati, and Los Angeles combine into the following lists showing demands for books for the month ending March 1st:

BOOK-DEALERS' REPORTS

1. The Right of Way—Parker. (Harper.)
2. The Man from Glengarry—Connor. (Revell.)
3. The Cavalier—Cable. (Scribner.)
4. Lazarre—Catherwood. (Bowen-Merrill.)
5. If I Were King—McCarthy. (Russell.)
6. The Crisis—Churchill. (Macmillan.)
7. In the Fog—Davis. (Russell.)
8. The History of Sir Richard Calmady — Malet. (Dodd, Mead.)
9. The Fifth String—Sousa. (Bowen-Merrill.)
10. The Eternal City—Caine. (Appleton.)
11. Count Hannibal—Weyman. (Longmans.)
12. The Ruling Passion—Van Dyke. (Scribner.)
13. A Lily of France—Mason. (Griffith & Rowland.)
14. Marietta—Crawford. (Macmillan.)
15. Graustark—McCutcheon. (Stone.)
16. Mrs. Wiggs of the Cabbage Patch—Hegan. (Century.)
17. The Benefactress—Anon. (Macmillan.)
18. Cardigan—Chambers. (Harper.)
19. The Velvet Glove—Merriman. (Dodd, Mead.)
20. D'ri and I—Bacheller. (Lothrop.)
21. Lives of the Hunted—Seton-Thompson. (Scribner.)
22. Alice of Old Vincennes—Thompson. (Bowen-Merrill.)
23. Circumstance—Mitchell. (Century.)
24. Truth Dexter—McCall. (Little, Brown.)
25. The Pines of Lory—Mitchell. (Life Pub. Co.)
26. At Large—Hornung. (Scribner.)
27. Tarry Thou Till I Come—Croly. (Funk & Wagnalls.)
28. The Red Chancellor—Magay. (Brentano.)
29. The Making of an American—Riis. (Macmillan.)
30. The Methods of Lady Walderhurst — Burnett. (Stokes.)

LIBRARIANS' REPORTS

1. The Right of Way—Parker. (Harper.)
2. The Crisis—Churchill. (Macmillan.)
3. Lazarre—Catherwood. (Bowen-Merrill.)
4. The Cavalier—Cable. (Scribner.)
5. D'ri and I—Bacheller. (Lothrop.)
6. The Man from Glengarry—Connor. (Revell.)
7. The Ruling Passion—Van Dyke. (Scribner.)
8. Blennerhassett—Pidgin. (Clark.)
9. Cardigan—Chambers. (Harper.)
10. The Making of an American—Riis. (Macmillan.)
11. Graustark—McCutcheon. (Stone.)
12. The History of Sir Richard Calmady—Malet. (Dodd, Mead.)
13. Lives of the Hunted—Seton-Thompson. (Scribner.)
14. Up from Slavery—Washington. (Doubleday, Page.)
15. Marietta—Crawford. (Macmillan.)
16. Alice of Old Vincennes—Thompson. (Bowen-Merrill.)
17. The Life of R. L. Stevenson—Balfour. (Scribner.)
18. The Benefactress—Anon. (Macmillan.)
19. Eben Holden—Bacheller. (Lothrop.)
20. If I Were King—McCarthy. (Russell.)
21. Tristram of Blent—Hope. (McClure, Phillips.)
22. The Tory Lover—Jewett. (Houghton Mifflin.)
23. The Life of J. R. Lowell—Scudder. (Houghton Mifflin.)
24. Life Everlasting—Fiske. (Houghton, Mifflin.)
25. A Sailor's Log—Evans. (Appleton.)
26. Tarry Thou Till I Come—Croly. (Funk & nalls.)
27. The Helmet of Navarre—Runkle. (Century
28. The Christian—Caine. (Appleton.)
29. The Heroines of Fiction—Howells. (Harp
30. The Octopus—Norris. (Doubleday, Pa

ANTICIPATIONS ALREADY BECOMING FACTS

MR. H. G. WELLS has recently made a forecast of civilization a hundred years hence, constructing from facts now apparent a sketch of the future. His pen has hardly ceased scratching when his prophecies begin to come true. Wisely he reasons that rapid transit—of goods, of persons, of ideas—is the key to progress, and wherever the spirit of advancement is dominant lightning-like communication is striven for as nothing else.

The Pacific Islands that mark the drowned area that once connected Asia and Australia are almost as backward in developing their rich resources as they were when the first Dutch and English and Portuguese traders called at them—all for lack of railroads. But already restless Americans have invaded the Philippines and while the Government is rapidly perfecting the harbor of Manila, railroads are pushing into Luzon and nothing can delay their introduction into the other islands. American engineers are driving a railway line across Porto Rico, and Sir William Van Horne's achievement in Cuba is being followed by other lines of communication. An Isthmian canal is assured. The Pacific cable will hardly be laid when Marconi, at his present rate of progress, will possibly have rendered cables obsolete. Such transit lines as the spurs that Russia is adding to its trans-Asian railroad, to strengthen its clutch on Manchuria, and the road already surveyed through the wide deserts of Central Australia from the northern coast to the southern, not to speak of the Cape to Cairo line and many other improvements of countries unexplored only yesterday, these show the world-wide eagerness to wipe out distances.

STRAIGHTENING RAILROAD LINES

AT home the movement is more concentrated and faster than elsewhere; and here it is that Mr. Wells's predictions will soonest be materialized. Already many of the greater Eastern railroads have rearranged their right of way to approximate the straight lines which Mr. Carnegie has prophesied and which Mr. Wells believes future roads will follow, and now a change of line has been begun on the Central Pacific that is said to be the most radical straightening that any railroad has ever undergone.

Anyone who has traveled on the Central Pacific will remember the interminable miles of sagebrush and salt and alkali that stretch along the track from Ogden up around Salt Lake to the little station of Lucin and beyond across the desert. There are two hills also, over which it costs the Central Pacific heavily every year to transport its 600,000 tons of freight and its thousands of passengers. Some time ago the railroad planned a cut-off crossing the islands at the lower end of the lake from Salt Lake City to Lucin, practically leaving Ogden off the trans-continental route. But it was recently decided to abandon the south shore cut-off and strike directly across from Ogden. The argument that the new plan meant a saving, it is said, of nearly a million dollars a year in operating expenses and the fact that the Ogden-Lucin route is shorter by sixty-seven miles were the deciding factors in the change of plan. The new line, grading for which has started, will run fourteen and one-half miles to the lake, across eight miles of shallow water on a trestle to Promontory, five miles on the peninsula, and eighteen miles to Strong's Knob, over water nowhere deeper than thirty feet. Thence it will curve away to Lucin, reaching there by a line that altogether is forty-three miles shorter than the present route. It is a vast plan and only one among many the Union Pacific is carrying out on the railroads under its control. Its total effect is to make the Pacific Coast from one to two hours nearer the East with a resultant cheapening of communication.

FACTS FROM A RAILROAD'S REPORT

IT would be difficult to find more satisfactory and reliable comment upon the financial solidity and growth of our great railroad systems than is published in the report of a single line, the Pennsylvania, whose report for the year of 1901 has recently been published. The Pennsylvania, covering about 10,000 miles with its tracks east and west of Pittsburg, earned a total of nearly $200,000,000 last year, over $23,000,000 more than it earned in 1900. When the cost of

deducted its net earnings ...unted to nearly $65,000,000, more than $10,-...0,000 greater than in 1900. Its net income ...plicable to dividends reached nearly $30,000,-...00. Over these tracks alone 243,408,035 tons ...f freight were carried—equaling the weight of ...early 12,000 of the biggest steel ships yet ...uilt. Nearly 105,000,000 passengers were car-...ied—or about one and one-half times the popu-lation of the country. The development of trade throughout the section the road covers is shown in the note that 19,000 new freight cars were ordered during the year. Nor does the road forget old members of the industrial army it em-ploys. There are more than 1,100 employees receiving annual pensions, amounting to the total of upwards of $250,000. And an increase of the pension fund is asked for.

The report contains, besides these striking statistics of a successful year, a statement regard-ing the proposed tunnel into New York, giving reasons for the adoption of a tunnel as less ex-pensive than a bridge, and of electric power instead of steam because of the impracticability of the latter in tunnel use. A number of plans, all feasible, are in the hands of the commission of five engineers, two of whom, Mr. Charles M. Jacobs and Mr. Alfred Noble, are to direct the work, the former in the North River and the latter in the East River section.

The annual reports of our great railroad systems together are practically a history of our industrial progress. The extensive area of varied prosperity which this single statement discloses is a valuable chapter.

MEETING FOREIGN TARIFFS

THE tariff laws in foreign countries often pre-sent peculiar difficulties to the men who are ...ttempting to bring in American goods and those ...f other countries. There are a number of matters ... detail,—to learn which every exporter has been ...ced to give up some profits. Russia's retalia-...y tariff is an old story, but Germany's tariff ...s new surprises almost daily. An American ...aker of ice-cream freezers, for example, sent his ...oduct to Germany under a duty that classified ...em as wood in conjunction with iron. Because ...ey were not patented, they were imitated. The ...nerican cheerfully kept on paying freight and ...ty, and undersold the imitators. Thereupon ...e imitators begged the Government to change ...e classification of the freezers; and now ice-...ream freezers enter Germany as iron in conjunc-...ion with wood, with a much higher tariff. The ...naker is planning to pay the freight and the ...igher duty and still undersell. Again, in Ger-...any, a brilliant customs officer dissected a little ...n appliance and found a brass spring concealed within. The appliance now pays duty as brass in conjunction with iron. Emery wheels with an inner band of iron, were reclassified as iron in conjunction with emery. Reclassification may be made at any time; it is a powerful weapon. A pin-cushion sent into Germany with a pin in it might conceivably be classified as brass in con-junction with silk and sawdust.

France also furnishes difficulties. Though there was a deficient crop of wheat this year in France so that the price of bread was increased a cent a loaf, a strong national miller's association kept the tariff so high on flour that wheat could be imported whole, ground, and then sold more cheaply than American-ground flour. American patent medicines cannot be sold in Austria-Hun-gary except semi-surreptitously, and in Germany an official examination of our canned goods makes it futile to send to that empire any canned food that contact with the air will spoil. In Russia a new difficulty is met. An American merchant sent a large number of trade catalogues, printed in Russian, to his Russian agents. They never arrived. Later he learned that before even so harmless a bit of literature as a catalogue can en-ter the Czar's dominions, a petition to allow its dissemination, together with a sample copy, must be sent to the official censor, and passed.

The day is now past when goods entering an Australian port must pay a tariff every time they cross a colonial boundary as before the fed-eration, but a commercial traveler in South Amer-ica is obliged to send his samples through a sim-ilar process. As he travels from New York to Brazil, from Brazil to Argentina, and from Argen-tina to Uruguay, he must pay duties in each new country, with exasperating delays in addition. Indeed, it is only by consigning his samples to resident agents to be bonded, or by carrying damaged, undutiable samples, that the sophisti-cated traveling man is able to get on. Even when he has taken all necessary precautions, however, he has not finished with officialdom. In Brazil, for example, for every order he takes he is liable to a tax, half of which goes to the informer who notifies the officials of the trade. Naturally, under such conditions, the shrewder salesmen put off booking orders until the steamer for the next port is about to sail.

TRADE-MARKS AND PATENTS ABROAD

ANOTHER complication of foreign trade, the details of which have stopped or delayed temporarily the sending of American goods, ... connected with the trade-mark and patent ... These differ so greatly in the various fo... countries, that careful study alone prepa... exporter to pass safely the stumbling ... Ma... :arn these matters only by bitter exp...

An American, for example, sent his goods, stamped with an American trade-mark, to Germany year after year until his product had made a reputation. A German imitator coolly took possession of the trade-mark, registered it, stamped his goods with it, and then forbade the American house to use their legally protected label. The American was obliged to submit.

Imitations must be expected. When Russian dealers shipped Russian petroleum into Korea in Standard Oil tins, the American company were able to take only ordinary trade precautions to distinguish their better oil. Germany makes a specialty of imitating American goods in a cheaper form, and even China and Japan are following American models. As a curious instance, however, of Oriental inability to construct mechanical creations, the story is told of the experience of some Far-Eastern engineers who had been educated in America. Carefully following their lecture notes, their books, and an American machine standing by, they built a dynamo, complete in every particular save one —it would not work. But a large proportion of the imitations in the East work and they furnish a constant competition against the original article.

NIAGARA FALLS AS BAKER AND WAITER

NIAGARA FALLS became not long ago a lamplighter for the Pan-American Exposition; and now among the many marvels that the stupendous industrial developments along the river have brought, the harnessed waterfall has become baker and waiter. On the cliff just below the falls the Natural Food Company, makers of shredded wheat biscuits, have erected a plant with 130 motors drawing power from the cataract. Into the building raw wheat is shot automatically from wagons, cleaned, cooked, soaked, shredded, pressed, cut into cakes, dried and boxed by intricate machinery whose motive power is the energy of the falls in the form of electricity.

The factory is of the kind that wise modern manufacturers are coming to believe in,—clean, light, fitted with the most advanced appliances for heating and ventilation, and equipped with a lecture-room and a dining-room—furnished with a piano—for the employees. The food is cooked in an electrical kitchen that brings in the waiter element of Niagara. For in connection with the plant is a visitor's lunch-room, the operation of which makes the electrical power perform a feat that is almost magical.

The visitor sits at what looks like a neat little table, but is in reality a miniature flat-car on a miniature railway. He reads the menu card, notes his order on a slip, places the slip on the car, and presses a button. Suddenly, of its own accord apparently, the car shoots to the main track and away out of sight kitchenward, though actually the pressing of the button has lighted a lamp in the kitchen, and an operator has thrown the particular switch affecting the car at the seat where the button has been pressed. Still in the same weird silence the luncher sees the car reappear, pass all the branch tracks leading to other seats, snick around the curve of his branch and come to rest before him, laden with the meal he has ordered. Accidents have been made impossible by the block system. The whole affair is marvelous, and so little like a toy that in seeing the equipment one wonders if the dining-tables of the future will resemble, as this novel lunch-table does, the switchyard of a railroad terminal.

And yet this whole establishment is only one of many that have grown up in the small region that seems destined to become the industrial centre of the continent and a rich hinterland for the growing foreign commerce of the port of New York.

VAST RECENT DEVELOPMENTS AT NIAGARA

THUS far most of the development at Niagara has been on the American side of the river. Here plant after plant has sprung up, and scrap-heap after scrap-heap has grown as newer and better machinery has been devised at a speed unequaled in any other industry. Now the Canadians have waked to the possibilities of the region just as they began to see some time ago the vast potentiality of the rapids at the Soo. The Canadian Niagara Falls Power Company has already let out contracts for a plant near the Dufferin Islands just above the falls which will use the largest generators ever built, and which is expected to furnish power by a transmission line as far West as Toronto. The Toronto City Council, moreover, is considering a petition to the Ontario Legislature for permission to establish on its own account a transmission line from the falls to give the public cheap electrical power,—a novel kind of municipal enterprise.

The installation of the three great generators by the Power Company will mark an important advance in the use of electrical power. According to the method now employed, the power will be secured through the use of turbines at the bottom of a wheel-pit above the falls, which will connect with dynamos at the top. After passing the turbines the water will discharge through a tail race below the falls. The generators, weighing each 200 tons, will save, it is expected, ninety per cent. of the shaft horse-power, and will operate at an unusually high speed, producing a potential of 12,000 volts without the use of transforming apparatus. It would not take many

such machines to bring the whole region within 150 or 200 miles of Niagara into vital connection with the pulsing energy of the falls, or possibly even to make true the dream of using that energy in the industries of New York and Chicago. And not the least significant feature of the establishment of the mighty plant is the fact that it will owe its existence to American initiative, American capital, and American apparatus.

ENGINEERING DIFFICULTIES ON THE CANAL ROUTES

A MEMBER of the Isthmian Canal Commission, who is an engineer of international reputation, has placed at our disposal a statement of fact which reveals, more clearly than does any previous discussion of the question, the relative importance of the difficulties confronting the engineer in the field.

The chief practical difficulty in the case of the Nicaragua scheme is the nature of the San Juan river. This river drops a hundred feet in the hundred miles of its course from the lake to the sea. The upper part of the river —which is as wide as the Mississippi at Dubuque —is full of rocks. About half-way to the sea, the San Carlos River dumps into the San Juan a lot of sand, which the confluent streams deposit at the seashore in the shape of sand-bars. Greytown, within commercially historic times, had a harbor; it has none today; and the river-delta is cluttered up with a wilderness of shingly flats through which it is not worth while to attempt digging a channel. The plan is, therefore, to cut, parallel with the stream, a canal having four locks, joining the stream at a point above where the San Carlos river enters. A dam across the San Juan will carry the lake-level down to the point at which the canal makes connection with the river.

Harbors will have to be built at the Caribbean terminus of the canal, where the wet season lasts two years end-on, with a rainfall of 240 inches in a year; and fifty of the first sixty-five miles of canal must be cut through primeval Central American swamp. The personal equation is not an entirely negligible quantity in a country where mosquito-bites mean poisonous boils that have to be cut out of the flesh; where, as you cross a bog lumberman-fashion on teetering poles, a misstep plunges you down below the green scum among the water-snakes; where your machete is alternately used to sever Gordian knots of creepers, and to render harmless the constricting coils of ophidia thick through as fire-hose.

Having built the canal through this difficult country from sea to lake, an elaborate system of water-works will be necessary to regulate the amount of water flowing from the lake, since the amount of water varies greatly according to the season. The lake itself is navigable without improvement. In the seventeen miles of canal from the western end to the Pacific Ocean, four locks will be needed; and a harbor must be made at the shore, where none at present exists. On the Pacific side of the isthmus, the climatic conditions are tolerable.

At Panama, the engineering difficulties are of a different nature. A boisterous tropical torrent —the Chagres River—partly coincides with the necessary route of the canal. The chief problem is to keep the stream from inundating the canal at irregular intervals. The engineers propose to overcome the difficulty by a dam across the river that will turn it for twenty miles of its length into a lake—Lake Bohio it has already been styled. Those competent to decide pronounce this part of the plan eminently feasible. The second point of difficulty is that of the Culebra Cut, through which a ship would pass upon leaving Lake Bohio. This cut has been partly excavated by the French; 40,000,000 cubic yards remain to be taken out. It is eight miles long—seven miles of which are "heavy" digging; the remaining mile is exceptionally difficult. In the total length of forty-nine miles from deep water to deep water, five locks will be needed—not more than two at any one point.

THE INSURANCE OF WORKINGMEN

RECENTLY John Burns, the English labor leader and member of Parliament, flatfootedly told an audience of his constituents that three out of every five of them would end their days in the poor-house. "In the face of statistics," he declared, "you cannot gainsay it." Yet there are various old age insurance schemes in successful operation in England; and in other European countries where industrial conditions are firmly fixed, notably Germany, national insurance laws provide against the destitution that invalidity brings to thriftless workingmen. An interesting document lately issued by the Massachusetts Labor Bureau reviews them all. It also summarizes the various other insurance regulations, as, for example, those providing against accident and sickness, which European countries have made, and details one or two of the private schemes for insuring employees in vogue in the the United States. Some of these schemes are worthy of wide imitation, and even the legal provisions that Europe finds necessary for accident insurance deserve consideration, though American workingmen in the main courageously prefer to take care of themselves in their own way, and certainly have no such tendency as John Burns bluntly ascribes to the workingmen of England.

In Germany insurance is obligatory in the most important industries. It covers sickness, accident

and disability through old age; is administered through organizations; and is supported by compulsory contributions from employees, employers and the Government in such proportions, that of all benefits thus far paid under the law, the workmen have contributed $31,500,000, the employers a like amount, and the Government, $37,500,000. The Sick Benefit Associations have endeavored to improve hygienic conditions by disseminating pamphlets and providing for lectures; and in 1898 they paid over 9,000,000 claims for sickness alone, so many that the law establishing them gained the name of *Klebegesetz*, or Paste Law, from the task of sticking stamps on the multitudinous tickets. Out of sixteen million wage-earners among the fifty-six million inhabitants in the Empire, thirteen million are insured against old age invalidity. So attractive, moreover, has the accident insurance become that not only are the whole sixteen million workmen enrolled, but also another million artisans and small proprietary farmers. Working excellently in Germany, the whole system is yet of such a paternalistic nature that it could hardly be commended for adoption in a democracy like ours.

Austria also has a similar system without the old age provision. Belgium provides a charitable relief in case of accidents and encourages saving for old age by granting subsidies to the thrifty who swell the Superannuation Fund, but leaves sickness to mutual aid societies. In France there is no compulsory insurance except for seamen and miners, but a rigid Employer's Liability law makes the establishment of insurance systems by employers almost a necessity. Sickness is amply provided against by the 11,000 mutual aid societies,—which are doing a noble work, says Mr. H. G. Wadlin, who prepared the Massachusetts report, in fighting tuberculosis and alcoholism. State funds and subsidies encourage sickness and old age insurance in Italy, and for certain occupations insurance against accident is required. England manages much as we do, with practically no Government attention to the matter but with a strict Employer's Liability law, with countless mutual aid societies and insurance companies to be resorted to voluntarily, and with a closely organized trades-union system that provides for the idle periods of union members.

For a time employers conducted private mutual insurance schemes, but when it proved that these employers found it "cheaper to pay their insurance than to look after their plants," these were either modified or abandoned. There are at present, however, forty-six schemes in existence, approved by the Registrar-General, in which workmen and employers unite in maintaining an insurance fund, assuring 123,000 workers in factories and mines and on railroads against the buffets of fortune. The discrepancy between this number and the German millions, suggests that in spite of various kinds of voluntary insurance the melancholy figures of John Burns may be based on a serious state of affairs.

OLD AGE INSURANCE IN GERMANY

THE system of insurance in Germany is interesting in detail. It compels, for example, wage-earners receiving less than 2,000 marks per annum to provide for the period of their old age. The Government is the insurance company, and premiums are paid by affixing stamps to a card issued by the police. The amounts are regulated by the incomes of the insured, who for the purpose are divided into five classes as follows:

Class.	Income per year.	Premium per week.
First	$83 or less	.03
Second	83 to $130	.047
Third	130 to 202	.057
Fourth	202 to 273	.071
Fifth	273 and more	.085

In Germany the police have the life record of every citizen. An applicant for insurance is required to obtain from police headquarters a card specifying certain salient biographical facts. The number of this card is included in the record, and when it is filled with stamps the insured must return it to headquarters in person. The law also requires notification of a change of occupation or residence, or in case of marriage. Stamps are sold at all post-offices. They resemble postage-stamps in appearance, but are of a different size and design, and range from ten pfennigs to several marks. The latter are for quarterly payments on large incomes. The law provides that stamps must be affixed to cards on pay-day, be it weekly, monthly or quarterly. One-half the premium is paid by employers, the other half by the person insured, unless there is a contract or agreement otherwise. The employer is responsible to the Government and usually keeps the cards in his own possession, pastes on the stamps himself, and deducts the servant's share from his or her wages. A police inspector is liable to come around at any hour to examine the cards, and failure to observe the regulations is punishable by a fine.

The stipulation develops various understandings between employers and employees. In some instances big employers keep up the premiums for all their subordinates. Certain of the great manufacturers insure all persons in their employ under the highest class, which costs for each about thirty-five cents per month.

At the age of 60, or when so disabled that a living cannot be earned, the insured is permitted to draw four per cent. interest indefinitely on the amount standing to his credit on the books of the

Department, and at death the amount is divided among his heirs. When out of employment payment of premium may be omitted, but the fact must be promptly reported to the police. The law does not require a married woman to be insured, but in the event of a wage-earner marrying, she is not permitted to withdraw her deposit. She must wait till she is 60 or disabled to obtain its benefits.

There are various insurance schemes in Germany directed to providing against contingencies. One company guarantees its clients against the expense of illness on a premium of about two dollars per annum. The patrons are entitled to medical service, and if ill over five days are sent to a first-class hospital. In another institution a payment of twelve marks per year insures against loss of wages, the concern undertaking to pay them if for any reason the insured is unable to work. In Germany, all contracts between householders and their servants stipulate that the latter shall be cared for in illness. The value of this form of insurance may be realized when for a payment of about six dollars per year policies may be obtained for four servants, guaranteeing them medical attendance, and in case of necessity, a hospital.

ECONOMY IN MODERN MINING

THROUGHOUT the mining districts of California attempts are being made to operate the mines in accordance with the modern economic idea of the conservation of waste products and its utilization in decreasing the cost of production. At the smelters at Keswick and Delamar converters have been built in order that the dross may be got rid of in the *matté*, that is, while the metal is merely in the reduced state, before it has been refined. This saves the expense of carrying the dross to the refinery. In the Red Point gravel mine the drainage is used to develop traction-power to carry the gold material from the drift-face to the sluice. And in the Hidden Treasure mine the same use is made of the mine-drainage; the only difference being that in this case the drainage is converted into electric power instead of compressed air, a portion of which is diverted from the work of hauling the ore to furnish an electric lighting system for the mine. The great copper mine of Arizona, the United Verde, the property of Senator W. A. Clark of Montana, is now operated in connection with a mill for making copper tubing. The copper goes directly from the smelter to the mill. Thus, instead of leaving the works a mere bar of the raw material, the metal is turned out in the form of an article immediately available for industrial uses.

Nowadays, more attention is paid to the matter of economy in mining methods than to the actual quality of the ore in a given lode, for it is realized that a comparatively poor section may be made to yield a handsome profit at the low cost of production achievable by the employment of modern methods and the utilization of the residual product. Thirty years ago the exploration of the vein in the Oneida mine in Amador County was being carried on at a loss, because the ore was not of a sufficiently high grade to support the expense. At that time along the great Mother lode of California, it cost about $9 to get out of the ground and through the mill a ton of ore worth $12. Ore assaying less than this it was not considered worth while to handle. The report of the Oneida mine for the year up to the first of September goes to show that about 70,000 tons of ore, yielding $4.10 a ton, were mined and milled for $2.89 per ton. This gave a profit of about $1.20 per ton. The entire average cost of production was raised to $3.63 per ton by the expenditure on the construction account of seventy-five cents for each ton extracted.

In the early seventies the mine-workers had not yet penetrated below the 1,000-foot level. Now the safety-lamp follows the drill down to the 2,000-foot level, and even lower, the average depth at which mining operations are conducted being somewhere between 1,200 and 2,000 feet. In one of the largest gold mines of California, the Kennedy, a vertical shaft has been sunk to the depth of 2,600 feet. The cost of hoisting over these enormous distances becomes, of course, a very considerable item in the operating expense of a mine. In the Oneida mine a saving of thirty-five per cent. has been effected by the use of crude petroleum for fuel in place of wood in the hoisting-works, reducing the operating expenses sixty cents for every ton of ore extracted.

In the great Kennedy mine, which is on the same lode with the Oneida, the vertical shaft has done away with much of the enormous expense consequent upon the former method of following the dip of the lode by means of inclined shafts. It used to cost $5 a ton by the old system to mine and mill the ore, while by means of the vertical shaft, with its rapid hoist, the cost will be brought down to $2.25 per ton. There are 125,000 tons of ore in sight, on a lode which at the 2,250-foot level is ninety feet wide. Should the vein prove to be of equal width at the 2,600-foot level, the amount of the prospect yield will be very much greater. With such vast masses of country-rock to be handled, economy of method means not only cheaper production and greater profits, but it means the quicker and more thorough working of the State's resources,

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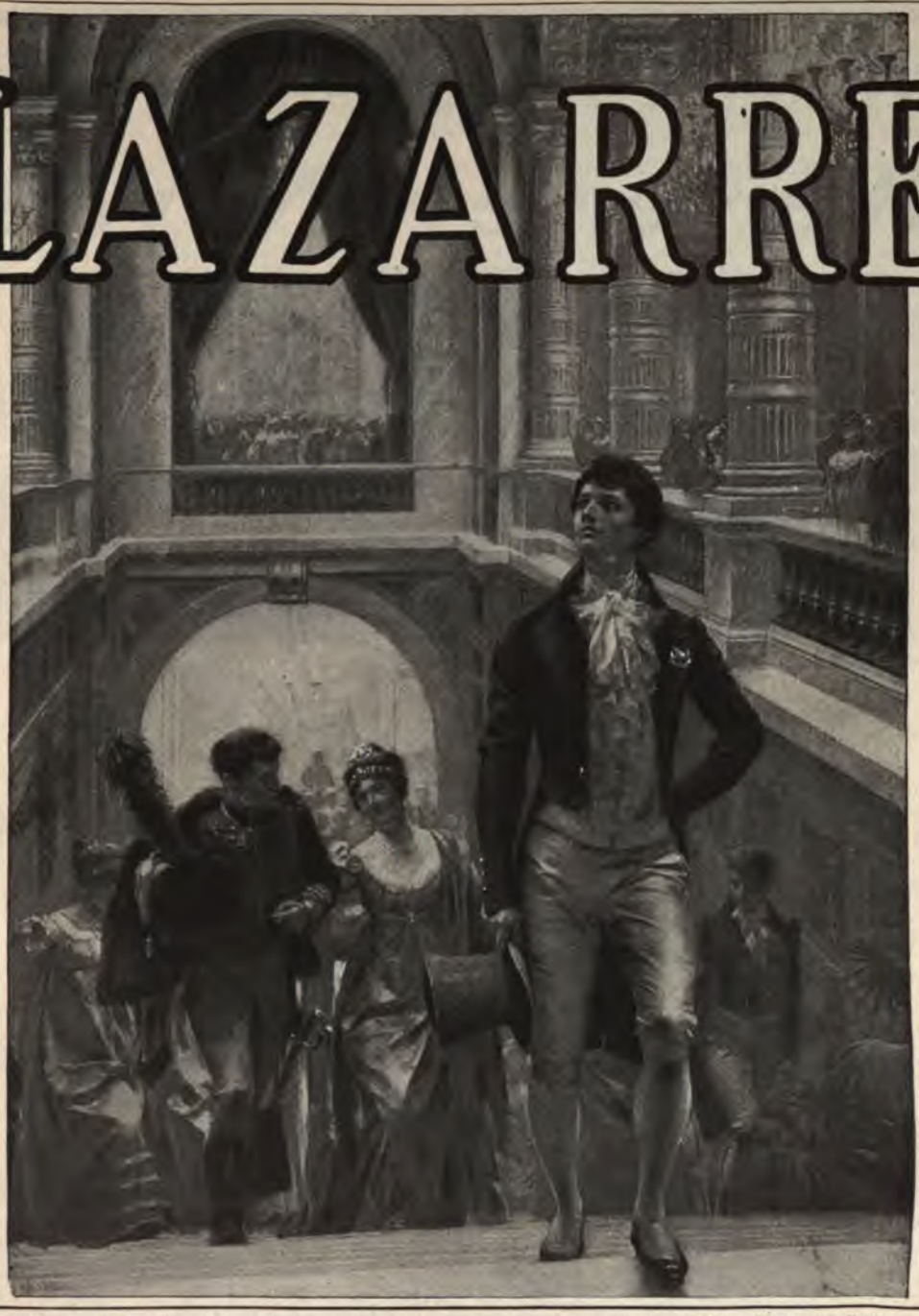

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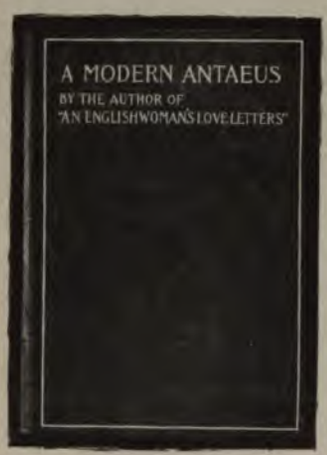

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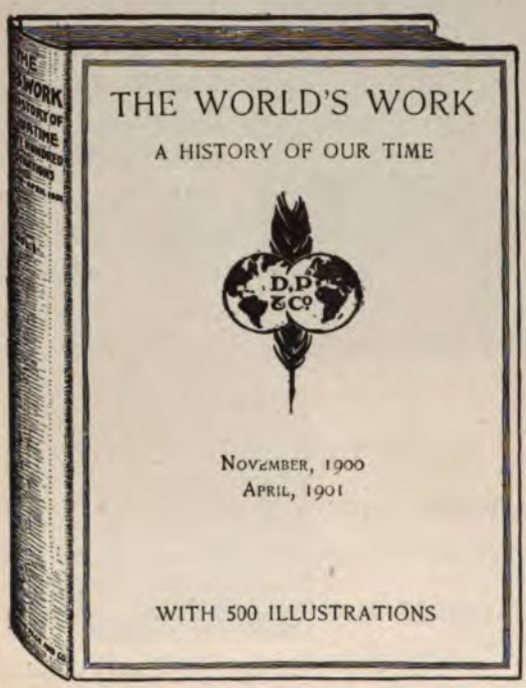

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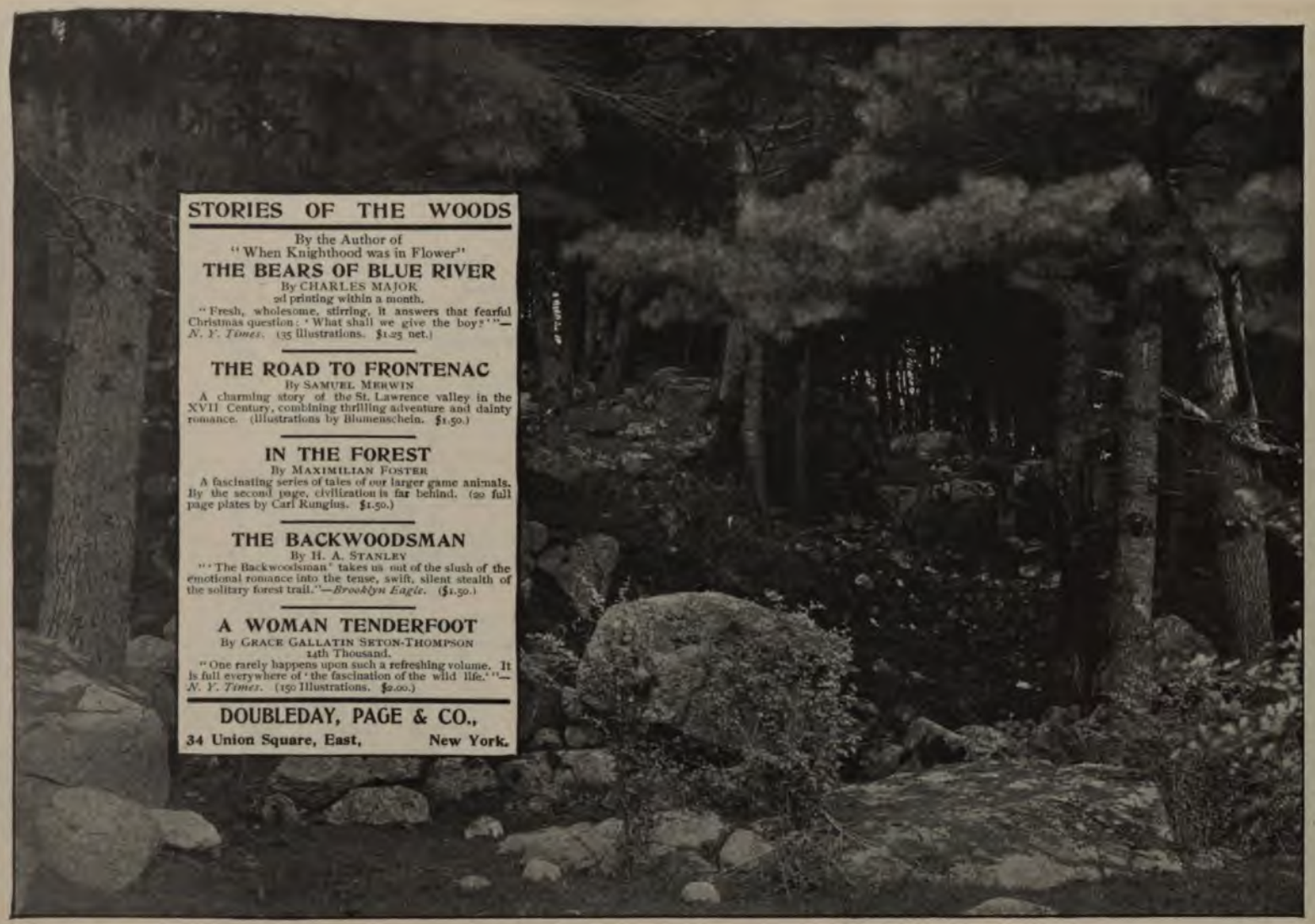

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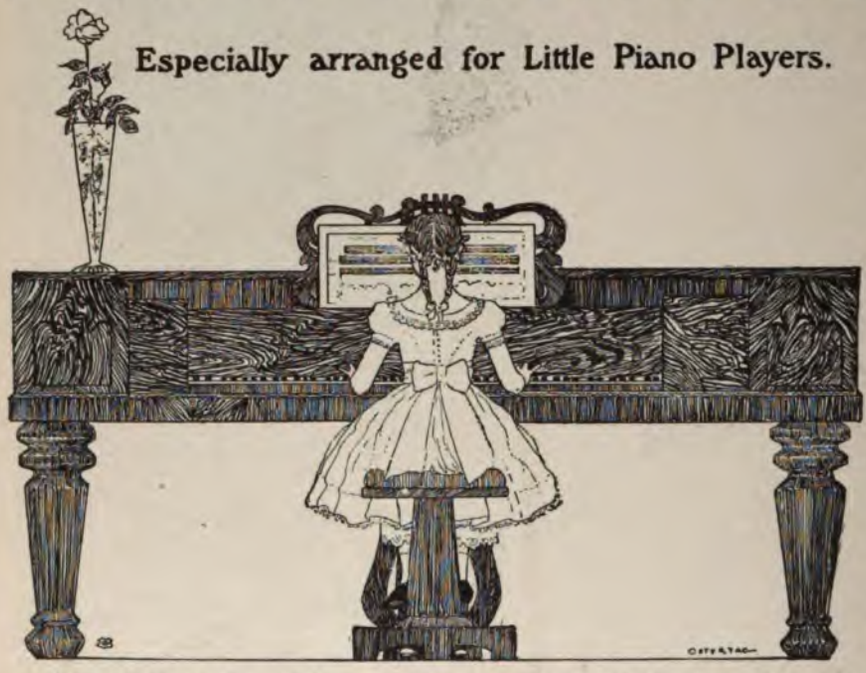

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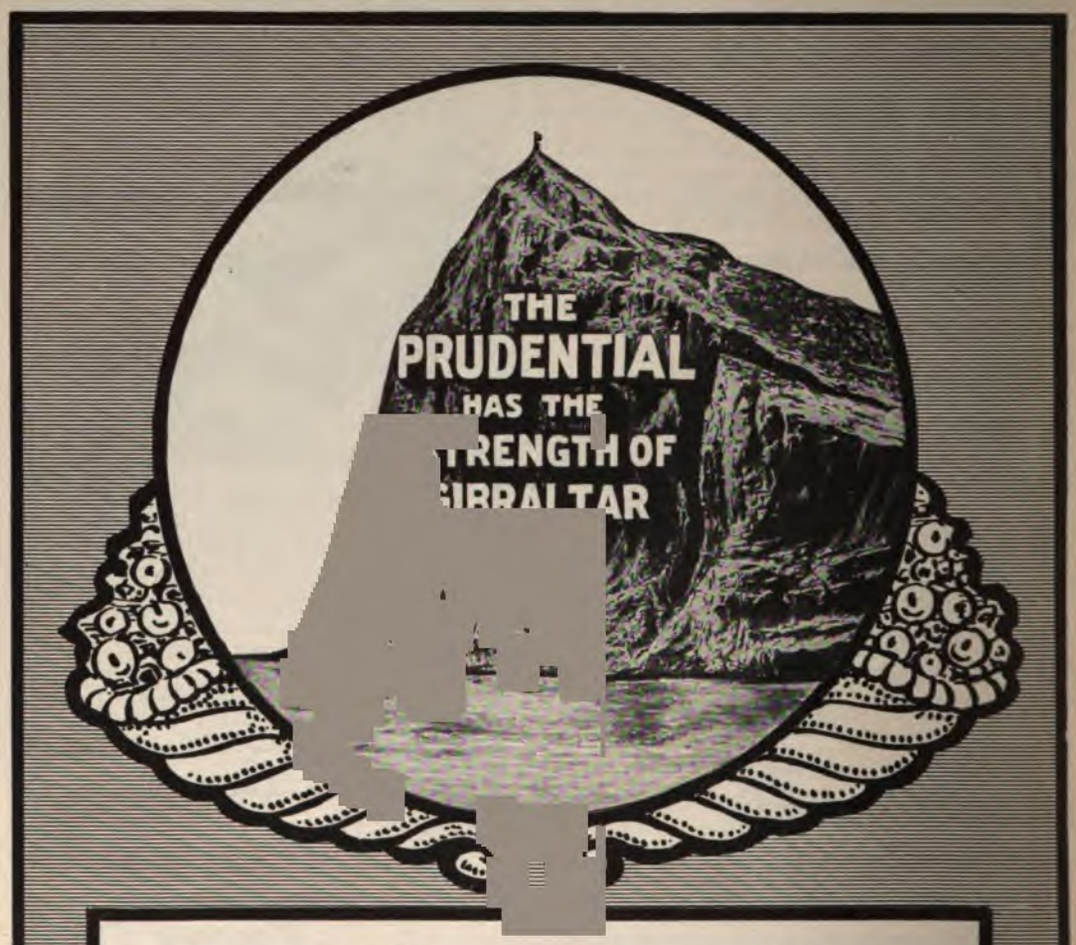

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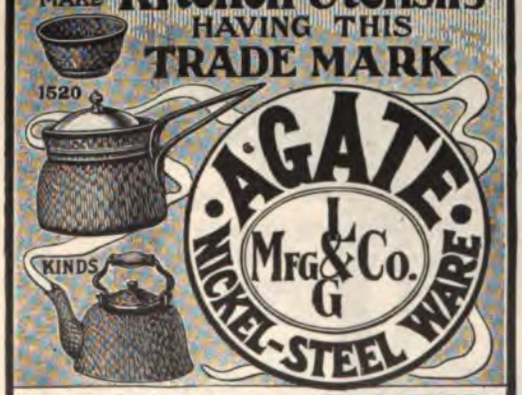

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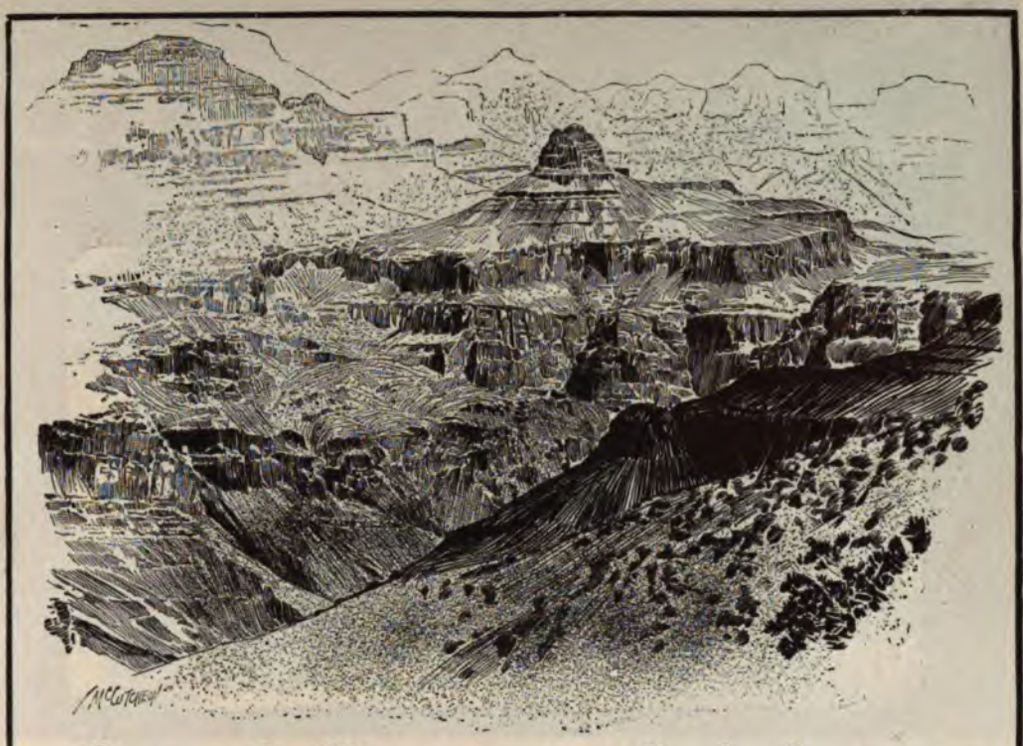

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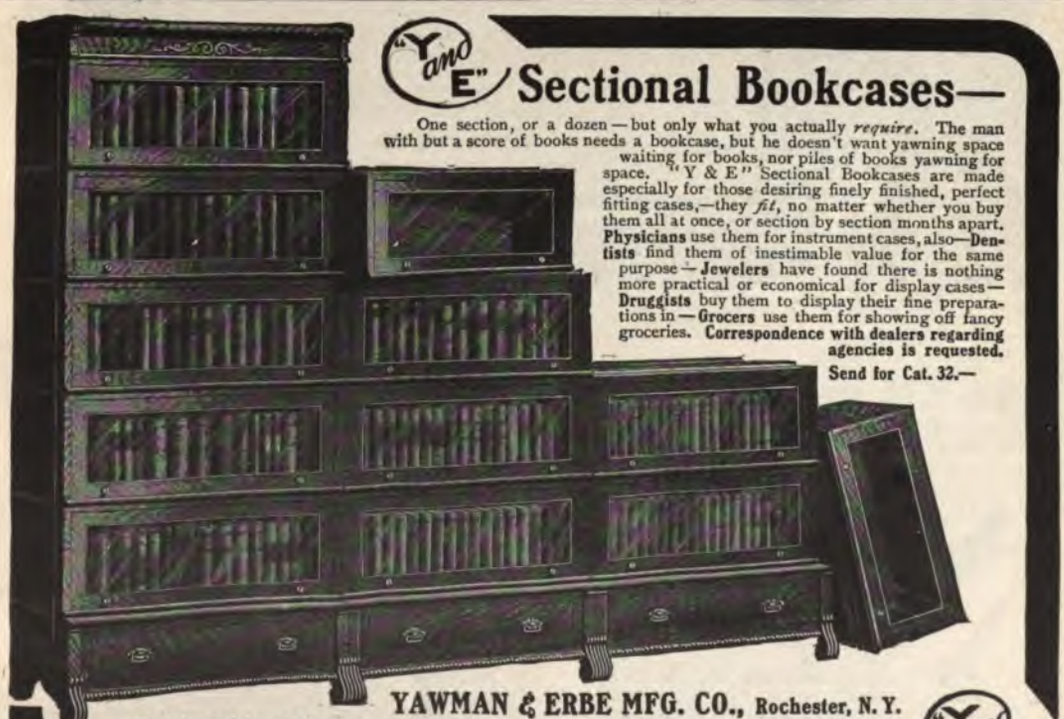

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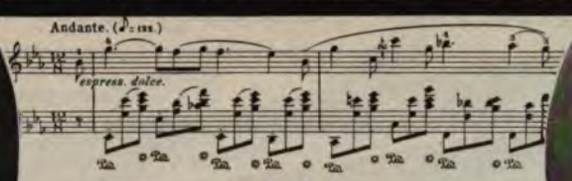

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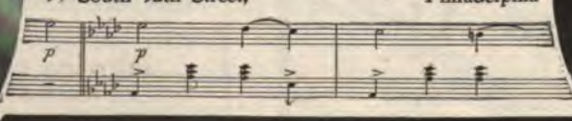

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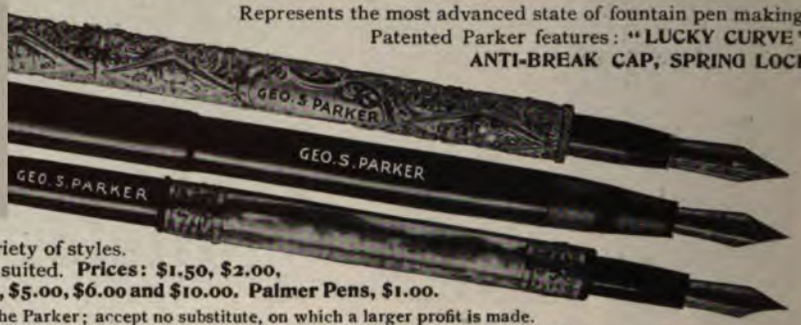

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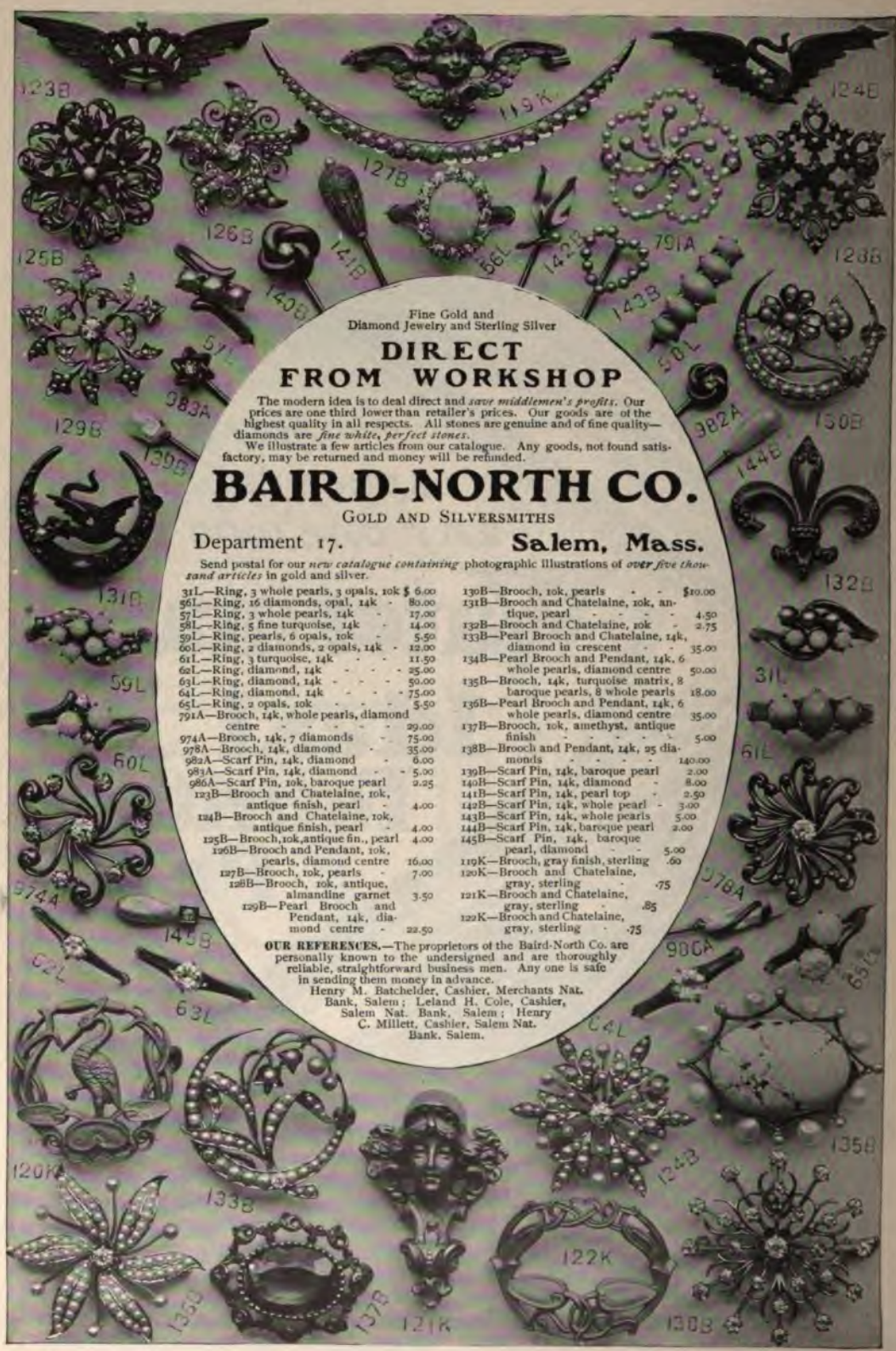

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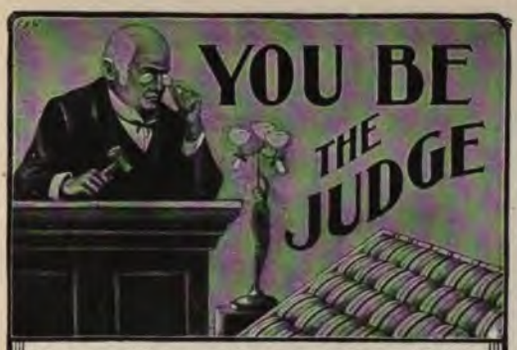

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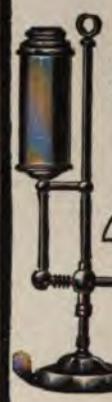

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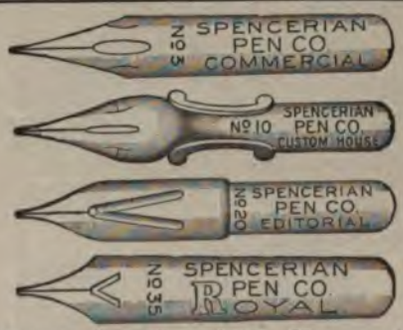

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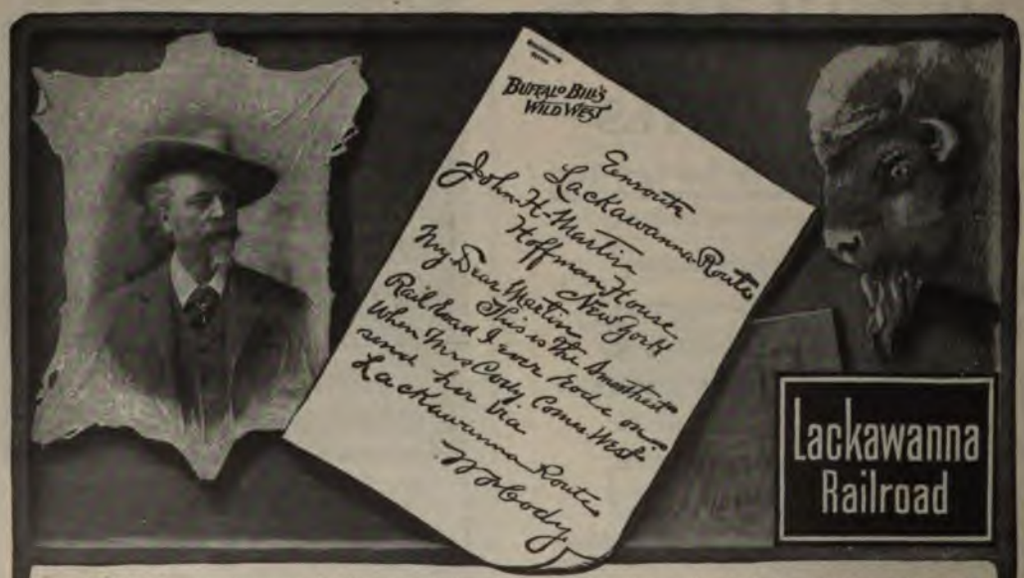

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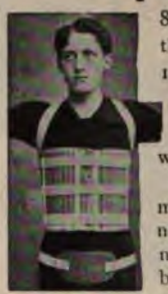

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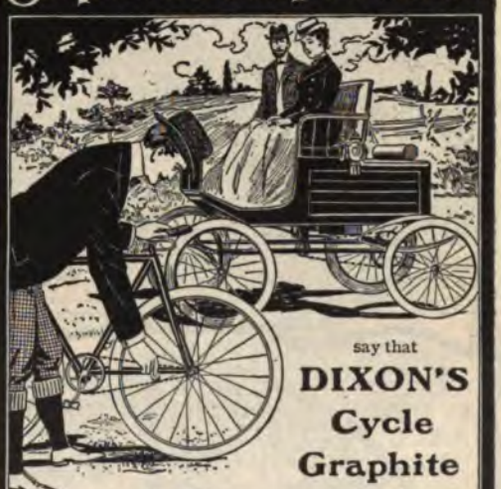

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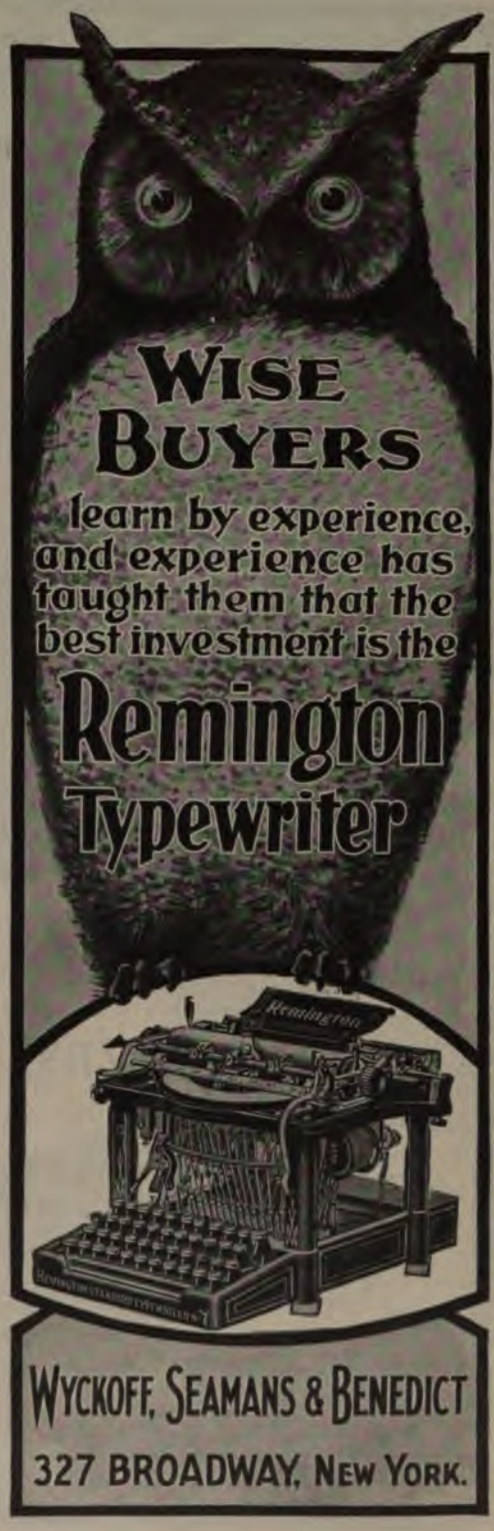

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By clear-eyed, wholesome, well-groomed look,
And fresh, clear-toned complexion;
And other soaps, if offered him,
Will meet with prompt rejection.

IT FLOATS.

A WORD OF WARNING.—There are many white soaps, each represented to be just as good as the Ivory; they are not, but like all imitations they lack the peculiar and remarkable qualities of the genuine. Ask for Ivory Soap and insist upon getting it.

NO. 211 PUNCH BOWL 15 IN. AZTEC PATTERN

When Buying, Buy for Posterity.

Nothing so dignifies a family as the elegant and valuable articles which descend from generation to generation. The best of its kind is always worthy — always respected, always valuable.

Libbey Cut Glass

is made for all time and will be as elegant a hundred years from now as it is today

Libbey *engraved on every piece.*

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